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# Bloomberg Businessweek

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The statement, "Initial clinical trials have shown encouraging results," is based on Juno Therapeutics press release dated June 1, 2015.
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Bloomberg Businessweek

# Contents

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Bloomberg Businessweek
September 28 — October 4, 2015



COVER: PHOTOGRAPH BY DAVID BRANDON GEETING FOR BLOOMBERG BUSINESSWEEK



**Cover Trail**

How the cover gets made

1
"Cover story is about fraud in online advertising."

"As in those banner ads I click on that promise me one quick trick to six-pack abs, but it turns out I have to do a ton of exercise and take pills?"

"That's a very small part of it. The general problem is that, when advertisers are paying for page views, they don't realize that a lot of those views are being produced by bots."

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"That's not what I said."

"Glad we're on the same page. So for the cover, should we do an evil robot on a computer with a fat wallet?"

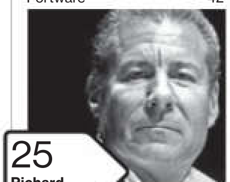
"Maybe we should try a more realistic illustration. The bots are really just servers that could be sitting in people's basements."

# Index
## People/Companies



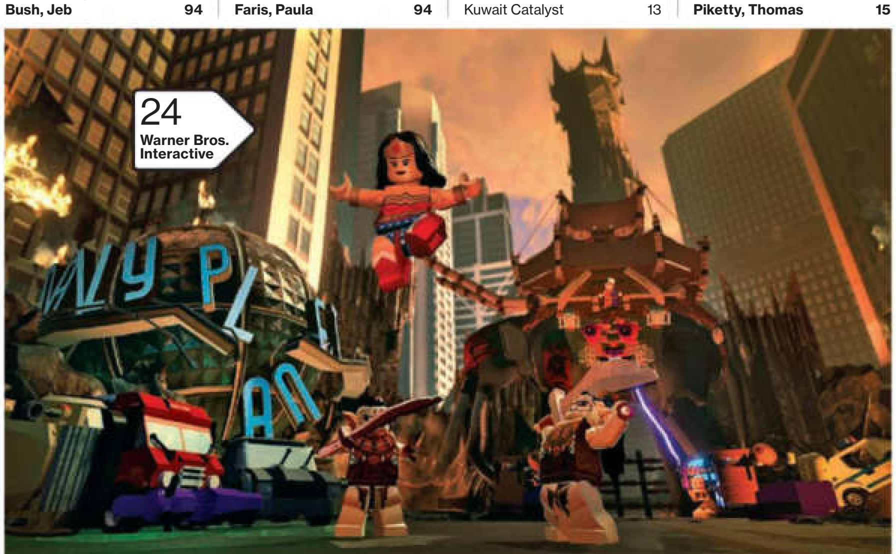
94 Joy Behar





25 Richard Plepler





24 Warner Bros. Interactive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FIDELITY **VIEWPOINTS**

# Turning points for investors

**Divergent global growth is creating new winners and losers. Hear from five experts**

**In recent years, China has been the growth engine of the world, but that engine has begun to sputter and slow. The impacts have reverberated through commodities, emerging markets and global stocks. But despite the problems in China, the U.S. economy is looking stronger, and other developed markets have been improving.**

**When the world is turning in different directions, which way should investors go?**

**Five leading money managers gathered to break down this unpredictable new environment at the Fidelity Inside/Out event in Seattle. They all agreed that the era of low volatility is over, and the market's leadership is shifting. Among each individual's top investing ideas were a preference for stocks over bonds, developed over emerging market stocks, and consumer discretionary, biotech, and home construction-related names.**

## Global growth is diverging

***Marc P. Seidner, PIMCO:*** Countries today are on divergent economic paths. The United States is emerging as the leader—the U.S. economy is growing just fine, particularly relative to the rest of the world.

***Sammy Simnegar, Fidelity Investments:*** China's slowdown has huge implications. During the last 10 or 15 years, China created a massive amount of demand for commodities, which powered growth in emerging markets like South Africa, Brazil and Russia. Europe is China's biggest trading partner, so the European economy is going to have a tough time; Europe could generate about 1 percent GDP growth. Japan has major demographic headwinds that I think will restrain its GDP growth to about 1 percent per year over the next few years. The U.S. has a very big domestic economy, so it is relatively insulated from China's weakness.

***Nelli Oster, Blackrock Investments Institute:*** Monetary policy reflects this divergence in economic conditions. With the U.S. growing, we expect a Fed rate hike later this year. Meanwhile, central banks in about 20 of the largest 75 economies actually cut rates in the first half of the year.

Divergence in monetary policies will reflect across asset classes. We expect continued strength in the U.S. dollar, especially against the euro and the yen. And, of course, China relaxed its currency trading bounds. To the extent that we continue seeing strength in the U.S. dollar, we would continue to see softness in dollar-denominated commodities. That's especially important for oil, where we're arguably still in a situation of oversupply.

## Rates remain bogged down

***Ken Leech, Western Asset Management:*** We expect global inflation to be really soft for a while. That's a pretty powerful theme for fixed-income investors, in part because we think long-term rates are really the story of inflation.

The Fed has indicated we can expect a very gradual process of normalizing rates, and we take them at their word. Although the U.S. economy looks reasonably vibrant, the global backdrop is still weak. Because inflation will likely stay soggy, interest rates are unlikely to move up sharply.

***Oster:*** We expect the rate hike to have the greatest impact at the short end of the curve in the U.S. Longer-term U.S. government bonds are likely to be a little bit more protected by factors such as safe haven demand, an aging U.S. population looking for income and relatively low yields in markets like core eurozone and Japan.

## Look at corporate and foreign bonds

***Leech:*** Given the current outlook, we think nongovernment bonds should outperform

HIROSHI WATANABE/GETTY IMAGES

government bonds. Nonresidential mortgage securities and nonagency mortgage-backed bonds look attractive. And we see some opportunities in the high-yield space. We wouldn't rule out investing in energy bonds. A lot of companies have been clobbered, but there are opportunities in the debt of energy firms that can withstand a $50 price of oil.

***Seidner:*** We are underweight U.S. fixed income relative to a lot of global markets. There's still opportunity in peripheral Europe—Italy, Spain, and perhaps Greece.

## Time for Europe and Japan?

***Oster:*** At this point in the recovery there are no longer screaming opportunities in the asset markets. But we prefer equities over fixed income, given the status of valuations.

***Seidner:*** While U.S. stocks seem fairly valued to us, we think that there are better opportunities around the world. Generally, we prefer Europe and Japan over the U.S., and, increasingly, China looks interesting—but we're hedging back into dollars.

***Oster:*** In equities, we're also overweight the eurozone and Japan, and underweight the U.S. Stocks in both the eurozone and Japan are relatively attractively valued and look likely to benefit from central-bank policies. In Japan, pension plans are shifting away from fixed-income investments into equities. What's more, Japanese companies are flush with cash, and are increasing dividends or buying back stock. Stock buybacks boost profitability as measured by return on equity, which could also translate into high valuations for the market.

***Simnegar:*** The downturn in China means that you need to be selective in emerging markets. Still, there are pockets of growth. For example, India's government is taking measures to reform and accelerate the economy.

I've been looking for secular winners that are trading at reasonable valuations. One of the best ways I've found to play the housing recovery in the U.S. is through companies listed in Europe that have U.S. operations. For example, Europe-based suppliers of plumbing and construction equipment that distribute products in the U.S.

## Consider biotech, consumers and financials

***Fergus Shiel, Fidelity Investments:*** My fund started investing heavily in biotech three years ago, and it remains our main emphasis. I believe the future looks pretty bright for the industry, but, more important, the companies I'm invested in have relatively low earnings multiples, very high earnings growth and cash generation, and have been good re-investors of capital.

The second area in which I'm most interested now is the U.S. consumer discretionary sector. The consumer should do reasonably well in the next year or two, in part because wages are rising, but also because credit is becoming more widely available. I'm less positive on consumer staples.

***Oster:*** We like financials, especially in Europe. Improving economic environments usually lead to loan growth, lower provisions, and higher underwriting. We also like tech companies, which are seeing healthy M&A activity.

We're more cautious on U.S. consumer stocks, both discretionary and staples. Valuations are pretty hefty, considering that consumer spending is still quite soft. Consumer discretionary stocks seem to have been driven mainly by consumer sentiment in recent years, rather than actual consumer spending or retail sales.

We're also underweighting U.S. companies and industries that pay high dividends, such as utilities, which have benefited from investors' search for yield in a low-rate environment. When rates go up, we expect these segments of the equity market to suffer disproportionally. ●

# Opening Remarks

# That'll Set You Back At Least $7.3 Billion

By Brendan Greeley

**Few complained about Volkswagen's special privileges while it was producing good cars. But it turns out it wasn't**



In Italy, the privilege is called *potere speciale*; in France, *action spécifique*; in the U.K., it's a "golden share." Those are all different names for an ownership stake that gives a government—be it national or local—special powers above any other shareholder. That makes a crucial difference in running a business. Governments, for example, have good reason to prevent jobs from moving to more competitive labor markets. A golden share can help with that.

In Europe, most golden shares are held in utilities and telecoms, companies that were state monopolies before being privatized. For more than a decade, the European Union, as it expanded and liberalized its common open market, has been trying to undo the persistence of state control. But there is one golden share that has endured, a German law so breathtakingly exceptional it can only be called what it is in fact called—"das VW-Gesetz," the Volkswagen Law. It is explicitly designed for a single company. Germany has managed to defend its golden share against the EU because VW had built a reputation as a force for good: responsible corporate citizen, pioneer in environmental progess. That reputation has just run out of Fahrvergnügen.

Regulators in the U.S., France, South Korea, Italy, and now Germany have announced investigations into whether Volkswagen purposely designed software so its diesel engines could defeat emissions tests. The company will recall 11 million cars, and its stock has fallen as much as 30 percent on the news. The company quickly set aside $7.3 billion to cover costs related to the scandal, a figure that may fall short of the mark. On Sept. 21, Martin Winterkorn, Volkswagen's chief executive officer, apologized, looking panicked. A metallurgist with a Ph.D. who used to run technical development for Volkswagen, Winterkorn has a reputation as an engineer's engineer. But there was no easy fix here. On Sept. 23 he offered his resignation to the company's supervisory board. The board quickly accepted. "The damage done," said a board member at a press conference in Braunschweig, "cannot be measured."

The same day, Stephan Weil, prime minister of Lower Saxony, the state where Volkswagen is headquartered, announced that "whoever's responsible would be aggressively sued." He spoke at the same press conference—and on behalf of the company. Weil sits on Volkswagen's supervisory board, because Lower Saxony owns 20 percent of the company. Per the Volkswagen Law, Saxony has a controlling interest with virtual veto power—the golden share. Weil

is both government minister and owner. This is a coziness that is exceptional even in consensus-driven Germany.

Publicly held German companies have two boards. Executives sit on the management board. They are in turn controlled by the supervisory board, which includes shareholders and labor leaders. Broadly, Germany's dual-board structure preserves executive independence. Yet at Volkswagen, labor has an extra friend on the top board: the state. "You have the voice of the government present in the shareholder meetings," says Carsten Gerner-Beuerle, an expert on corporate governance at the London School of Economics. "That is not something you'd see in any other board."

In Lower Saxony, labor leaders deliver votes to endemically left-center state governments, which in turn use their veto to keep Volkswagen's 72,000 German jobs in place. Working together, labor and government have extraordinary power at Volkswagen. There is no evidence to link

**Germany's Volkswagen Law made it hard to see just how badly managed the company had become**

this power to the company's diesel deception, though the setup does help shield the company from the capital markets. Porsche learned this lesson when it borrowed heavily to try to buy Volkswagen in 2008. Lower Saxony's golden-share veto protected Volkswagen, and overleveraged Porsche found itself acquired instead. "It's a strange, and a bit weird, construction," says Florian Möslein, a professor of corporate law at the Philipps University of Marburg. "There's a long history that we need to take into account."

Volkswagen was conceived in the 1930s as a company that would make cheap cars for the people—the folk. At the time, it had no shareholders. Ordinary Germans paid into subscriptions that guaranteed them a car. In 1938 the country's National Socialist government seized union assets to pay for a plant and housing for 100,000 workers, an influx that turned the tiny village of Fallersleben in Lower Saxony into what would later become the city of Wolfsburg.

The company didn't make cars for the consumer market until after the defeat of the Nazis. By then it had a new owner—the U.K., which occupied Lower Saxony and encouraged Wolfsburg to begin production of the snub-nosed cars that became a symbol of Germany's postwar economic miracle. The prewar subscribers, the labor unions, and the tax collectors of the largely rural state of Lower Saxony all had an interest in the factory. In 1960 what was then West Germany wrote the Volkswagen Law. It enshrined those interests, giving a little bit to everyone.

That eventually brought Germany into conflict with the EU. In 2000 the European Commission—the EU's executive body—began enforcement actions against the golden shares that remained in the newly privatized utilities in several countries. It acted against Italy for its shares in Eni, the former state oil company; against France, for its holdings in Elf Aquitaine, another oil company; and against the U.K. and its British Airports Authority. Several countries responded by defining their golden shares more narrowly, exercised only to defend a compelling national interest.

"The case of Volkswagen is peculiar because we are not dealing with public services," says Daniele Gallo of Luiss Guido Carli University in Rome. "We are dealing with a company that sells cars." In 2007 the commission won a judgment in the European Court of Justice against the Volkswagen Law. Germany, which usually follows the court's judgments, responded instead with improvisation and duct tape: It struck some of the law's provisions, which Volkswagen immediately added to its own bylaws. Lower Saxony retained its de facto veto over major decisions. The EC challenged, but the Court of Justice upheld the rejiggered law in 2013.

"It's very hard to justify the existence of this specific law," says Werner Eichhorst, who runs European labor policy for the Institute for the Study of Labor in Bonn. The close relationship between two of the company's power blocs—Lower Saxony and the labor unions—has kept wages high and put upward pressure on pay at the country's other car manufacturers. But this is a roundabout way of managing a country's labor policies. Germany's other carmakers and its medium-size family businesses—the Mittelstand—don't get laws tailored and retailored for them. Yet they have remained comparatively resilient during the last decade of boom, crisis, and recovery. The Volkswagen Law, says Eichhorst, has really only managed to do one thing: keep jobs in Lower Saxony.

It was unpopular to argue that the law had to go when Wolfsburg know-how was making clean, fast, fuel-efficient cars. Now, it's clear Volkswagen wasn't making any such thing. When corporate structures are opaque, says Möslein of Philipps University, they produce bad outcomes. The core problem at VW, he says, is the law that bears its name. It's made the company inflexible and badly managed. And it was hard to see that until the deception came to light.

With his golden share and veto power, Prime Minister Weil will have to decide who will next lead Volkswagen. He should consider lobbying his federal government to finally rewrite the Volkswagen-Gesetz. It's time for the state to get out of the automaking business. Volkswagen should become as free as any other German company. B

PHOTO ILLUSTRATION BY 731; PHOTO: TRANSTOCK/CORBIS; ISTOCK (2)

To read David Kahn on a better tennis tournament and Cass Sunstein on conspiracy theories, go to

Bloombergview.com

# The Marines Need A Few Good Women

**The Corps shouldn't be granted a waiver from integrating females**


The debate over whether female troops should serve in combat has been settled: They belong. The task now is to dissolve pockets of resistance, one of which is in the U.S. Marine Corps.

Under an order signed in 2012 by then-Defense Secretary Leon Panetta, all of the services are required to lift the "co-location" restriction on women in combat roles by yearend, unless they ask for an exemption by Oct. 1. Both U.S. Army General Martin Dempsey—chairman of the Joint Chiefs of Staff—and U.S. Navy Secretary Ray Mabus have urged the services to accept the change on the grounds that a more diverse force is a stronger force.

Yet the Marines seem determined not to go along. The corps released a summary of research in which the Marines compared two battalions, one with 200 men, the other with 100 men and 100 women. They were trained and tested in infantry, artillery, and armor over a nine-month period. The all-male group, according to the summary, significantly outperformed the integrated group in almost every metric. Women were not only slower and weaker, but they also injured themselves at six times the rate of men.

A closer look, however, shows that the protocol for the study and the way the results were interpreted are fundamentally flawed. For example, the summary report provides only averages. It makes no mention of individual top performers, among women or men. This is a remarkable oversight, because in the end it's individuals who are selected for combat roles. Nor did it specify the 39 tasks on which the two groups were equal.

Perhaps most important, many of the men in both battalions had lengthy military experience and years of strength and conditioning training, while the women were just out of basic training. Many had been recruited under lower standards than their male counterparts—they were given more time to complete a three-mile run, for example—whereas any women placed into combat positions would have to meet the same yardsticks as men.

It's difficult to say this study proves anything except the Marines' determination to prove women aren't up to the job.

Similar research in Canada and Denmark has found that women are suited to combat roles. In 2011, a study showed that U.S. women deployed to combat zones were as mentally resilient as men. The Pentagon found women serving combat-support roles in Afghanistan and Iraq talk more easily to local women and children, gaining information and trust.

Allowing women who meet the same standards as men to serve in combat improves a nation's ability to protect itself and its foreign interests. It's a widely accepted notion in more than a dozen countries—including Australia, France, and Germany. In the U.S., the Air Force plans to open seven combat positions to women next year, and the Army's elite Ranger School graduated its first two female officers in August. If Marines use their flawed study to request a waiver from the integration requirement, the Joint Chiefs and Navy have an obligation to reject it.

# Using Fire to Fight California's Wildfires

**Good forest management, including intentional fires, would have helped**

Warming temperatures and an historic drought made Northern California's Valley Fire spread faster and made it harder to fight. But the bigger culprit, sadly but thankfully, was something under human control: forest mismanagement.

There are five times as many trees per acre in this area as there were 150 years ago, and the underbrush is twice as thick, according to Scott Stephens, a wildland resource scientist at the University of California at Berkeley. If smaller wildfires had been allowed to burn 20 years ago, the forest wouldn't have grown so dense, and the flames wouldn't have had the fuel to reach the canopy, consume treetops, and send embers flying, spreading the blaze and resulting in three deaths and the loss of 600 houses.

The Valley Fire demonstrates what can happen when public and private landowners fail to manage their property. As long as people neglect to thin trees and reduce combustible underbrush—either mechanically, or by intentionally setting small fires or letting lightning-ignited fires burn—conflagrations like those now burning will grow more widespread and severe.

The problem, according to forest experts writing in *Science*, is the official reluctance to risk damage or injury in managing small fires. During the decade ending in 2008, less than half of 1 percent of natural fires were allowed to burn under observation. The U.S. Forest Service—which is in charge of most fire management—also has a financial incentive to put out all fires: National "fire suppression" is funded by Congress. Last year, the federal government spent $3 billion putting out fires—five times as much as 20 years ago—and state expenditures have doubled since 1998 to $1.6 billion.

The White House in 2014 issued a new national fire management strategy to encourage thinning underbrush and setting controlled fires. Over the next decade, most of the 155 national forests will be required to update their plans. Ideally, in areas close to people's homes, thinning is done by hand. But farther away, prescribed fires should be set, and in remote forests, natural fires should be allowed to burn under observation. B

ILLUSTRATION BY OTHER MEANS

# OPEC's Family Feud

▶ Members squabble with one another, but no one wants to leave

▶ "It's much easier to just keep OPEC alive than to shut it down"

When Venezuelan Oil Minister Juan Pablo Pérez Alfonso resigned in 1963, he blasted the Organization of Petroleum Exporting Countries, at the time torn by internal rivalries, for failing to produce any benefits for his country. Half a century later, OPEC is still split and Venezuela is again unhappy, this time at the unwillingness of the organization's top producer, Saudi Arabia, to rescue oil prices from a six-year low that's dragging the battered Venezuelan economy into an even deeper crisis.

On Sept. 10, Venezuela's oil minister, Eulogio del Pino, tweeted appeals for OPEC and non-OPEC countries "to have a discussion on fair prices, minimum prices to ensure sustainability" and to "overcome our differences of opinion." Venezuelan President Nicolás Maduro said on Sept. 16 that he was making progress on organizing a summit of petroleum exporting countries to have that discussion. OPEC member Algeria is backing the Venezuela-proposed conference—as well as Maduro's desire for a higher price. Venezuelan officials didn't respond to requests for comment.

Maduro's plans won't pan out unless Saudi Arabia stops flooding the market. There's no sign it'll retreat from that strategy, which is helping it preserve ▶

PHOTO ILLUSTRATION BY 731; PHOTOS: ALAMY (4)

and even gain market share. "OPEC is of no use today," says former Algerian Prime Minister Ahmed Benbitour. "The war now is about market share, not price, and Algeria is getting no benefit from this organization." OPEC declined to comment for this story.

Venezuela's and Algeria's complaints raise the question of why some members stay in OPEC if the Saudis call the shots and ignore pleas for higher prices. Neither Venezuela nor Algeria has made moves to quit. Not only is the group intact, but former member Indonesia is returning, boosting membership to 13 nations.

Disgruntled members "don't leave because they still believe there could be something in the future where the group does make a decision" to boost prices and cut production, says Jamie Webster, an oil analyst at researcher IHS. "It's much easier to just keep OPEC alive than to shut it down, and with it a key communication channel" among governments whose financial health depends largely on oil income.

Of the 1.7 trillion barrels that remain to be extracted worldwide, 1.2 trillion, or 70 percent, are controlled by OPEC's current members. Venezuela and Saudi Arabia hold 18 percent and 16 percent, respectively, and Iran and Iraq 9 percent each, according to oil major **BP**. These four nations, with Kuwait, are OPEC's founding members.

"Just look at the outlook for oil in the next 10, 20, 30 years. It is expected that OPEC countries will actually have to come up with most of the growth in supply to meet the demand," says former OPEC Secretary General Adnan Shihab-Eldin of Kuwait. "If OPEC didn't exist, it would be needed in the future much more than in the present or the past" to coordinate production and keep the world supplied.

Pricing has often been a bone of contention, with Algeria, Iran, Iraq, Libya, and Venezuela pushing for higher prices, a hawkish stand compared with Saudi Arabia and its neighbors Kuwait, Qatar, and the United Arab Emirates. "Venezuela's position within OPEC is to pursue a strategy of low production and high prices, since they can't attract investments" to boost output, says Carlos Rossi, president of Caracas-based consulting firm EnergyNomics. Gulf Arabs are more inclined to accept a lower price to keep consumers hooked on cheap gasoline and thus extend the Age of Oil. Saudi Arabia in particular is more likely to accept a lower price that preserves global growth and gives it influence far in excess of its actual economy. Says Ed Morse, Citigroup Global Markets managing director: "Saudi Arabia's economy is the size of Illinois's." Yet the nation sits at the same table as China, Europe, Japan, and the U.S. thanks to its role as the major producer.

> **"OPEC is like a family where the children quarrel but can't do without each other. They know they are better off talking"**

Instead of lowering output to prop up prices, as suggested by Algeria and Venezuela, Saudi Oil Minister Ali al-Naimi lobbied his OPEC counterparts in November 2014 not to yield market share to competing suppliers, including U.S. producers of shale oil. Crude sank and trades at about $50 a barrel, half its level a year ago. "What OPEC wanted to do is have a fresh look at the structural changes that have taken place in the oil market with the advent of U.S. shale and other producers, who at a very high price were able to bring in fresh supplies that far exceed what demand called for," says Shihab-Eldin.

Algeria's and Venezuela's attempts to recruit non-OPEC producers in an effort to increase prices have been rejected by Russia and Mexico, two of the largest exporters outside the group. The Mexicans say their focus is on restoring the productivity of their biggest field. Russia says it doesn't have the ability of some Persian Gulf producers to quickly raise or lower output because of the harsh winters and complex geology at its Siberian oil fields. "You cannot regulate productivity of Russian wells simply by turning a faucet," Sergei Klubkov, exploration and production analyst at Moscow-based Vygon Consulting, said in an e-mail.

The International Energy Agency says Saudi Arabia is winning the fight for market share, driving higher-cost producers—for example, some U.S. shale companies—out of business. Non-OPEC supply is expected to fall in 2016 by the most in more than two decades as producers shut wells that can't operate profitably with oil below $50 a barrel. Production outside OPEC will fall by 500,000 barrels a day, to 57.7 million, in 2016, the agency said on Sept. 11.

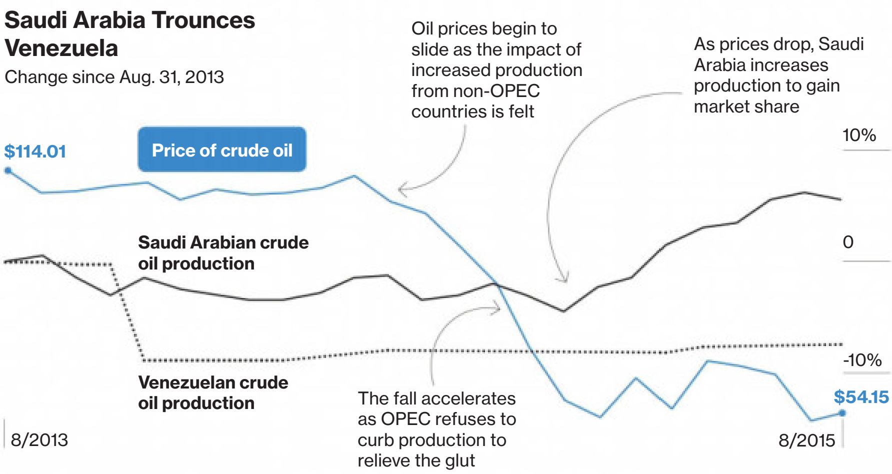
That's no solace for those in OPEC who are hard-pressed for cash. Fresh supply is likely to hit the market from Iran next year, when the oil export ban is lifted as a result of the July agreement with the U.S. and the other Western powers restricting its nuclear program. Oil prices could drop to as low as $20 a barrel, Goldman Sachs said on Sept. 11.

Saudi Arabia's production of about 10.5 million barrels a day is its highest ever, and the kingdom still has spare capacity of more than a million barrels. Other OPEC members are pumping less oil as projects to bring fresh crude to the market were derailed or delayed by political or social unrest. Venezuela is producing 2.5 million barrels a day, vs. a peak of 3.7 million in 1970. Algeria and Nigeria are in similar straits.

Those three nations, plus Iraq and Libya, are the OPEC members most vulnerable to political turmoil as cheap oil hammers their currencies

**Saudi Arabia Trounces Venezuela**

Change since Aug. 31, 2013




DATA: COMPILED BY BLOOMBERG

and weakens their ability to sustain social subsidies. Venezuela "appears poised for a near-term crisis" amid protests and shortages of basic goods as December's parliamentary elections get closer, analysts Christopher Louney and Helima Croft of the Royal Bank of Canada said in an August report on OPEC's "fragile five."

"OPEC is like a family where the children quarrel but can't do without each other," says Karin Kneissl, a Vienna-based university lecturer on energy politics and author of *Energy Poker*. "They know they are better off talking to each other to preserve the common, long-term interest; even those who left long to return if they can."

Indonesia voluntarily suspended its OPEC membership in 2009 as its production declined to the point that it had to import oil. Indonesia still pumps oil for its domestic market. It will return officially on Dec. 4 as the first member that isn't a net oil exporter. As OPEC's only member in East Asia, Indonesia could help strengthen the group's ties in the region, where oil demand is strongest, said Indonesian Energy Minister Sudirman Said in June. As both oil consumer and producer, it will help OPEC bridge the divide between the two groups, he said.

"The benefits from staying with the group outweigh by far the cost of membership," says Hasan Qabazard, chief executive officer of Kuwait Catalyst and former head of research at OPEC. "Getting firsthand access to market data, research, and information that may affect the market" could be "the motivation behind Indonesia's application" to return.

"I don't see OPEC falling apart," says Fayyad Al-Nima, Iraq's deputy oil minister for extraction. And Venezuela's reason for sticking with the group? Says Carl Larry, head of oil and gas for market researcher Frost & Sullivan: "It's either stay with OPEC and tag along or leave OPEC and be by yourself." —*Maher Chmaytelli*

**The bottom line** Saudi Arabia manages to impose its will on other members of OPEC, thanks to its ability to flood the market.

Income Inequality

## Another French Economist Makes Waves

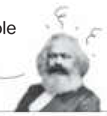
▶ **Piketty's disciple shows how tax evasion widens the wealth gap**

▶ **Governments can't rely on "the goodwill of offshore bankers"**

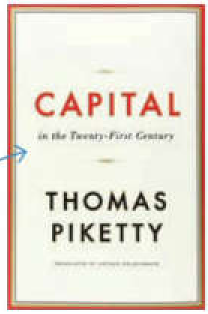
Economist Gabriel Zucman, a protégé of Thomas Piketty, offers up a big idea: The rich are using tax havens to hide a record $7.6 trillion, about 8 percent of the world's financial wealth. This means that inequality is even greater than previous research had indicated.

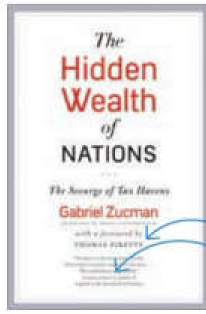
Tax havens are at the heart of financial and budgetary crises around the globe, Zucman argues in his book *The Hidden Wealth of Nations*. An economist at the University of California at Berkeley, he says evasion by individuals costs governments ▶

# Birds of a Feather




***Capital in the Twenty-First Century***
Thomas Piketty
2014*
**Excerpt:** "The distribution of wealth is too important an issue to be left to economists, sociologists, historians and philosophers."




***The Hidden Wealth of Nations***
Gabriel Zucman
2015*
**Excerpt:** "Nations can recover the sovereignty that has been stolen from them."

**Piketty's name appears twice on the cover of Zucman's book, which is just 116 pages**

◀ $200 billion a year. And legal havens used by U.S. multinationals cost governments $130 billion annually in lost revenue.

**1.5m** copies sold—and it's 700 pages

There's never been as much wealth sitting in tax havens as there is today, Zucman says, whether it's **Apple** funneling billions in profits through a tiny Irish unit, or Jérôme Cahuzac, the former French budget minister who used Swiss accounts to cheat on his taxes. (He admitted his misdeeds and still faces trial.) Among multinationals, Zucman found the majority of foreign profits reported by U.S. companies are kept offshore in a handful of havens. Among individuals, at least $2 trillion held in Swiss banks is undeclared by account holders to their home countries, he estimates. Despite the Group of 20's declaration of the end of banking secrecy in 2009, the amount of foreign money in Switzerland has risen 18 percent, says Zucman.

Piketty is the French economics superstar whose 2014 best-seller, *Capital in the Twenty-First Century*, helped spark a global debate on inequality. Zucman studied for his doctorate under Piketty, who encouraged him to look for clues to the role of taxes in inequality, and wrote the introduction to Zucman's book. Weighing in at just 116 pages (not counting footnotes or introduction), *The Hidden Wealth of Nations* reads like a call to arms in what the Berkeley professor writes is "a battle of citizens against the false inevitability of tax evasion and the impotence of nations."

The University of Chicago Press, Zucman's U.S. publisher, is taking advantage of the link to Piketty. The covers of the two books resemble each other, and Piketty's name appears twice on Zucman's jacket. The titles are plays on classic economic treatises. Piketty's evokes Karl Marx's *Capital*. Zucman's is a nod to Adam Smith's *The Wealth of Nations*. Piketty himself is unabashed with praise. "Gabriel's book is probably the best book that has ever been written on tax havens and what we can do about it," he said in an e-mail.

During his research, Zucman had a eureka moment. For years, economists had puzzled over a mystery: Financial liabilities around the world consistently outstripped the reported financial assets held by investors by trillions of dollars. In theory, assets and liabilities are supposed to balance each other out.

Sifting through central bank data from various countries, Zucman found those trillions were missing because they were showing up as shares of mutual funds incorporated in tax havens, primarily in Grand Cayman, Ireland, and Luxembourg. His theory: The rich have used those investments to hide their wealth. He estimates as much as 30 percent of the financial assets owned by the richest individuals in Africa and Latin America is held offshore. In Russia it's as much as 50 percent.

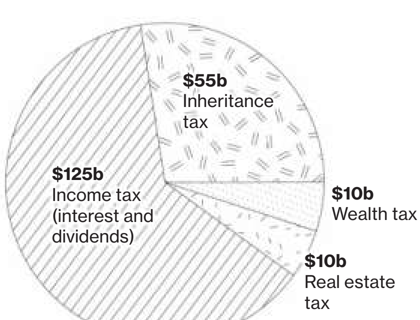
Zucman sees a need for a global register of who owns the world's wealth, similar to various catalogs for real estate holdings put together by local tax authorities. Such a database doesn't have to be public, but he says it must be available to regulators. Government can no longer rely on "the goodwill of offshore bankers" for sharing information, writes Zucman.

For companies, taxable profits should be allocated between countries based on actual conditions, such as where a company's sales come from or where most of its employees work. Says Zucman: "If a significant fraction of rich people can evade taxes, and if the rest of the population feels taxes are not fairly enforced, then the willingness to pay taxes will disappear." —*Jesse Drucker*

**The bottom line** Almost $8 trillion is hidden in offshore havens from tax collectors, according to Berkeley economist Zucman.

### What Tax Havens Cost the World

Yearly global tax revenue lost as a result of offshore tax evasion




DATA: GABRIEL ZUCMAN

Recession

## Australia Pays the Price For Depending on China

▶ **The newly elected prime minister has to preserve growth**

▶ **"Heavy manufacturing in Australia is in some ways a lost cause"**

Throughout Australia's industrial heartland, factories are closing. About an eight-minute car ride from the center of Melbourne, a **General Motors** plant that in 1948 produced the first automobile wholly made in the country is scheduled to shut for good in 2017, victim of a rising Australian dollar that caused labor costs to nearly double from 2001 to 2011. **Toyota** and **Ford** factories are set to close within two years, leaving Australia without any domestic auto production. Down the road from the GM plant is a facility operated by **Boeing**. In 2010 it sold the plant's equipment for making metal aircraft parts to **Mahindra & Mahindra**, an Indian company that's shipping the machinery to Bengaluru. Last year, **Alcoa** closed a nearby aluminum smelter.

Until recently the sad decline of heavy industry had little impact on the country's highflying economy.

*U.S. PUBLICATION DATE; MARX: ROGER VIOLLET COLLECTION/GETTY IMAGES; AUSTRALIA DATA: AUSTRALIAN BUREAU OF STATISTICS

Australia's factories were closing, but its mines were booming. Chinese demand for Australian iron ore and other resources kept the economy humming. The country hadn't suffered through a recession since the early 1990s.

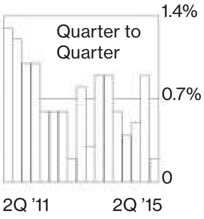
The boom is over as the Chinese economy slows, and the woes of the manufacturing sector are complicating the job of new Prime Minister Malcolm Turnbull. Lawmakers from the right-of-center Liberal Party on Sept. 14 chose the former Goldman Sachs banker to be their new leader, ousting Prime Minister Tony Abbott amid concerns that Australia's long run of economic growth was in danger. Gross domestic product in the second quarter expanded just 0.2 percent over the first quarter, worse than the 0.4 percent expected by economists. The unemployment rate is at 6.2 percent, holding near a 13-year high.

Turnbull, who was communications minister under Abbott, is promising action. "My government has a major focus on tax reform," he told reporters on Sept. 20. That will mean less reliance on income taxes and more on consumer levies. An early investor in technology startups before entering politics, Turnbull in March co-authored an article in the *Australian* newspaper with Vivek Kundra, executive vice president of Salesforce.com and former chief information officer for President Obama. The pair lauded companies like Uber and Airbnb. "The most successful businesses in the 21st century will be those that embrace digital disruption as an opportunity, and not something to guard against," they wrote.

For all his talk about the transformational power of the Internet, the Australia that Turnbull leads still depends on the old-fashioned business of digging things out of the ground and shipping them overseas. Resources account for 52 percent of exports, up from 31 percent in 2000, according to data from the Australian Bureau of Statistics and consultant AlphaBeta.

The value of exports from Australia's service sector including banking and telecommunications fell from 26 percent as a share of total exports in 2000, to a likely 20 percent this year. The country's export base has narrowed to levels approaching that of a "banana republic," says Andrew Charlton, who was an adviser to former Labor Prime Minister Kevin Rudd. The last few Australian governments have assumed low interest rates and a falling currency would help revive the non-commodity industries. "No such resurrection is occurring," he says. "Even some low-income countries like Nepal, Kenya, and Tanzania have greater export diversity than Australia."

**Australia GDP growth**




The commodities boom helped take the Australian dollar to a high of $1.10 in 2011. That clobbered manufacturers. By 2013 labor costs were higher than those of any Group of Seven economy. Since then, they've dropped 14 percent, according to ▶


Turnbull, an advocate of digital innovation in an economy that's barely growing

CHRISTOPHER PEARCE/GETTY IMAGES

◀ the Organisation for Economic Co-operation and Development, but the decline is too late to save many factories. Manufacturing is 7 percent of the economy, down from 12 percent in 2001. "Heavy manufacturing in Australia is in some ways a lost cause, even with the Aussie plunging," says Alex Gardner, an analyst in Hong Kong with Bloomberg Intelligence.

That lack of products to sell is making it harder for Australia to benefit from the 20 percent drop in the Aussie dollar over the past year. A weaker currency ordinarily gives exporters an edge over rivals. But not when China, the biggest customer of your chief exports–iron ore, coal, and other commodities–just isn't buying more, no matter how low the price.

Not everyone agrees the situation is so bad. "There's a bit of an obsession with iron ore prices in Australia," says Mike Smith, chief executive officer of Melbourne-based ANZ Bank. Since services account for 8 out of 10 jobs and 80 percent of GDP, resources are "not the be all and end all," he says. "The underlying economy is actually performing OK." Tourism is thriving, and construction is booming thanks to low interest rates. Turnbull doesn't have much time to convince voters Smith is right: He has to call new elections by late 2016. —*Bruce Einhorn, Michael Heath, and David Fickling*

**The bottom line** Australia's new prime minister must diversify the country's export base and nourish the digital economy.

Aid

## Cash Handouts Give Kenyans a Leg Up

▶ **Impoverished Africans are given money and invest it wisely**

▶ **"We're just betting that we're on the right side of history"**

As part of the research for their Ph.D.s in development economics, Harvard grad students Michael Faye and Paul Niehaus spent their summers trying to give cash to poor villagers in Kenya. The villagers were at first perplexed; development experts thought the two had lost their minds. People who live on less than a dollar a day, they said, were sure to spend the money on cigarettes and alcohol.

The pair persisted, gathering piles of evidence that the very poor could spend large sums prudently. To choose the recipients for a $1,000 handout, they looked for families that lived in huts with thatch roofing, not those with the metal roofs more prosperous villagers could afford. In 2009 they set up a charity, GiveDirectly. Eventually major donors such as **Facebook** co-founders Chris Hughes and Dustin Moskovitz and **Google.org** chipped in millions.

Giving money directly to the poor turns out to be more efficient and productive than distributing food and goods through charities with high overhead. Those in extreme need take the cash and invest it in livestock, small businesses, and metal roofs, among other things, according to studies by the World Bank and other organizations. The White House, the World Bank, and the United Nations have issued reports saying the cash approach to aid should have priority over other forms of assistance when appropriate.

The two economists hope to turn their theory into a business by selling software that makes it more secure and easier for governments and international aid groups to deliver assistance, including cash, to villagers who have access to digital and mobile technology. Kenyans often do their banking by cell.

The software will help those dispensing cash figure out "who they want to help, keep track of what happens to those people, what help they receive, what help they still have to receive," says co-founder Niehaus, now an economics professor at the University of California at San Diego. Faye is chief executive officer of their for-profit company, **Segovia Technology**. On Sept. 17, Reid Hoffman, co-founder of social media company **LinkedIn**, led a $13 million initial funding round for Segovia, which Faye and Niehaus, now Ph.D.s, founded last year. Save the Children and the International Rescue Committee have already hired Segovia for projects in Asia and Africa.

A challenge facing Faye and Niehaus is how willing the world's 4,480

humanitarian aid groups, with 450,000 workers and $25 billion in donations, will be to switch from a system they've relied on for decades. "For the first 50 years of humanitarian assistance, giving in-kind aid was the de facto approach," says Waheed Lor Mehdiabad, of the UN Refugee Agency in Geneva. "You just buy goods, transfer them, store them, and distribute them." An entire system has grown up around the model, he says, and replacing it with a new one will require enormous effort. Christopher Schroeder, an angel investor and member of Segovia's board, says, "We're just betting that we're on the right side of history on that trend and it's never going back."

Cash transfers and vouchers account for only 6 percent of international humanitarian aid. On Sept. 14 the Overseas Development Institute, a U.K. think tank, published a report commissioned by the British government calling for that number to increase dramatically. The report says a move to a "coordinated system of cash transfers" is needed. The refugee crisis in the Middle East and Europe is adding a sense of urgency to the debate. Jim Yong Kim, president of the World Bank, said in an e-mail that cash transfers are playing a crucial role in efforts to end extreme poverty. "We believe in this because of hard evidence," he said.

**"We believe in this because of hard evidence." —*Jim Yong Kim, president of the World Bank***

A 2013 study in Uganda showed women who received $150 saw a 49 percent increase in their earnings after about 18 months compared with those who received business skills training and follow-up meetings with community workers but no cash. The cash recipients spent the money to invest in learning a trade or starting a small business. They also were working harder and longer. Another study, in Sri Lanka, found rates of return on the cash handed out averaging 80 percent after five years.

The most striking evidence of the efficiency of cash transfers comes from GiveDirectly. The organization delivered, via the mobile banking system M-Pesa in 2010-11, a year's income of $1,000 to rural Kenyans who live on about 60¢ a day. The recipients showed a 34 percent increase in earnings and a 52 percent rise in assets. Beneficiaries invested the cash, buying livestock and land. About 90¢ of each dollar donated to GiveDirectly was transferred straight to rural families.

Both Niehaus and Faye agree that cash is not a panacea for Third World poverty and that more research needs to be done. "We're not saying cash should replace all aid, because roads still need to be built and food needs to be supplied to places where there are no markets," Faye says. Those exceptions aside, the pair ultimately sees cash as the aid of choice. —*Sangwon Yoon*

**The bottom line** Poor Africans given large sums use the money to boost their productivity and increase their wealth.

**Edited by Christopher Power**
**Bloomberg.com**

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# How EpiPen Became a Hit

▶ Mylan's marketing turned the allergy device into a must-have

▶ But if the price increases a lot, "that could create some backlash"

In a 2007 purchase of medicines from **Merck KGaA**, drugmaker **Mylan** picked up a decades-old product, the EpiPen auto injector for food-allergy and bee-sting emergencies. Management first thought to divest the aging device, which logged about $200 million in revenue. Then Heather Bresch, now Mylan's chief executive officer, hit on the idea of using old-fashioned marketing in part to boost sales among concerned parents of children with allergies. That started EpiPen, which delivers about $1 worth of the hormone epinephrine, on a run that's resulted in its becoming a $1 billion-a-year product that clobbers its rivals and provides about 40 percent of Mylan's operating profit, says researcher ABR|Healthco. EpiPen margins were 55 percent in 2014, up from 9 percent in 2008, ABR|Healthco estimates.

How Mylan pulled that off is a textbook case in savvy branding combined with a massive public awareness campaign on the dangers of child allergies. Along the way, EpiPen's wholesale price rose roughly 400 percent, from about $57 each when Mylan acquired the product. "They have done a tremendous job of taking an asset that nobody thought you could do much with and making it a blockbuster product," says Jason Gerberry, a Leerink Partners analyst.

But while EpiPen has given countless parents a sense of security that their children can go out in the world safely, the device's soaring price—up 32 percent in the past year alone—has forced some families to make difficult choices to afford the life-saving medicine. The price increases are among the biggest of any top-selling brand drug, according to DRX, a unit of Connecture that tracks drug pricing. After insurance company discounts, a package of two EpiPens costs about $415, DRX says. By comparison, in France, where **Meda** sells the drug, two EpiPens cost about $85. "There is a danger with that," says George Sillup, chairman of the pharmaceutical and health-care marketing department at Saint Joseph's University. If the company raises the price too much "that could create some backlash."

The company sees it differently. "Mylan has worked tirelessly over the past years advocating for increased anaphylaxis awareness, preparedness, ▶



PHOTO ILLUSTRATION BY 731

and access to treatment," Mylan spokeswoman Nina Devlin said in a statement. She said the company doesn't control final retail prices for EpiPen and offers coupons that eliminate copays for most patients. Bresch declined to comment for this story.

The CEO has made no secret of her strategy to increase demand for EpiPens by getting them stocked for emergency use in more schools and other public places. (So-called entity prescriptions allow for this.) "We are continuing to open up new markets, new access with public entity legislation that would allow restaurants and hotels and really anywhere you are congregating, there should be access to an EpiPen," Bresch said at a conference on Sept. 17.


Over the past seven years, Mylan has hired consultants who had worked with **Medtronic** to get defibrillators stocked in public places. Bresch, the daughter of Senator Joe Manchin (D-W.Va.), turned to Washington for help. Along with patient groups, Mylan pushed for federal legislation encouraging states to stock epinephrine devices in schools.

In 2010 new federal guidelines said patients who had severe allergic reactions should be prescribed two epinephrine doses, and soon after Mylan stopped selling single pens in favor of twin-packs. At the time, 35 percent of prescriptions were for single EpiPens. The U.S. Food and Drug Administration had changed label rules to allow the devices to be marketed to anyone at risk, rather than only those who'd already had an anaphylaxis reaction. "Those were both big events that we've started to capitalize on," Bresch said in October 2011.

In 2013, the year following the widely publicized death of a 7-year-old girl at a school in Virginia after an allergic reaction to peanuts, Congress passed legislation encouraging states to have epinephrine devices on hand in schools. Now 47 states require or encourage schools to stock the devices.

Since 2012, Mylan has helped popularize its brand by handing out free EpiPens to more than 59,000 schools. Last year it signed a deal with **Walt Disney** to stock EpiPens in Disney's theme parks and on cruise ships. And Mylan spent $35.2 million on EpiPen TV ads in 2014, up from $4.8 million in 2011, according to researcher Nielsen. Mylan disputes the ad spending figures but declines to offer alternatives.

In part because of Mylan's efforts, the number of patients using an EpiPen has grown 67 percent in the past seven years. Many kids with allergies own multiple sets, for school and home. And for doctors, who write prescriptions for the name they know best, the EpiPen brand "is like Kleenex," says Robert Wood, a pediatric allergist at Johns Hopkins University School of Medicine.

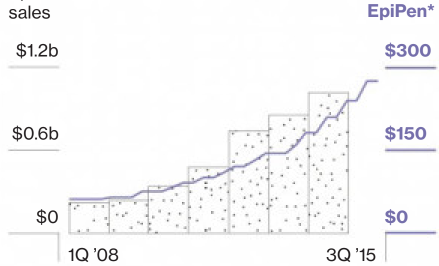
So far rivals haven't been able to break Mylan's market grip. **Sanofi**'s Auvi-Q, introduced in 2013, is in the shape of a credit card and—unlike EpiPen—gives step-by-step audio instructions. But Sanofi priced Auvi-Q about the same as EpiPen, and the product struggled initially to gain insurance coverage. Sanofi says 9 out of 10 patients with commercial insurance can now receive coverage for Auvi-Q prescriptions. Yet in the first half of 2015, EpiPen had about an 85 percent share of epinephrine prescriptions, vs. only 10 percent for Auvi-Q, according to Symphony Health Solutions data compiled by Bloomberg.

Still, allergy sufferers without generous health benefits feel the pain. Denise Ure, a social worker in Seattle, has a peanut allergy so severe that the last time she ingested a nut crumb, in 2011, she needed three EpiPens and was hospitalized. Ure says she cried last year when she found out a prescription for two EpiPens would cost her about $350. "I was terrified because there's this lifesaving medicine that I needed, and I couldn't afford it," she says. Ure now carries two EpiPens she got in Canada, where they cost about half as much.

The biggest threat to EpiPen could come from **Teva Pharmaceutical Industries**. It settled a patent lawsuit in 2012 allowing it to market a generic version of EpiPen as early as this year, if it wins FDA approval. Mylan isn't too worried. Predicted Bresch in August: "You would not see the traditional market loss because of just the brand equity with EpiPen." —*Cynthia Koons and Robert Langreth*

**The bottom line** When Mylan bought EpiPen in 2007, the device had $200 million in annual sales. Today revenue exceeds $1 billion.

### A Needle in a Fat Stack




Autos

## Now Tesla Wants More Than Valley Boys

▶ Its Model X SUV was designed to woo women buyers

▶ "With the X, I think we probably will be slightly majority female"

When Dallas-area Realtor Katherine Schwartz went shopping for an SUV, she test-drove several, including a Chevrolet Tahoe, a Land Rover LR3, and a Mercedes-Benz GL550. But Schwartz plunked down a $5,000 deposit for a vehicle no consumer has been able to sit in, much less take for a spin: **Tesla Motors**' all-electric Model X crossover sport-utility vehicle, which begins deliveries on Sept. 29. "You name it, I test-drove it. But when I saw the video of Elon Musk revealing the Model X online, I was, like, 'OK, this is it,'" says Schwartz, who's always in a car hauling clients, real estate signs, two kids and their friends, or the family dog. Plus, her husband already drives a Tesla Model S sedan. "I'm very impressed with the safety record of the Model S, and I figure that the X will be comparably rated," she says.

Tesla is betting a lot of women will feel the same way. If the company is to meet an ambitious annual sales target of 500,000 vehicles by 2020, about 10 times this year's production, it needs to attract a whole new contingent of drivers—and women buy more than half the crossover SUVs in the U.S.

The company's initial customers, many of them tech-savvy early adopters, were overwhelmingly male. In 2012, the year the Model S hit the market, women accounted for only 13 percent of the electric sedan's U.S. registrations, according to researcher IHS Automotive. The Tesla brand has since gained ground with women,

FROM LEFT: CHRIS GOODNEY/BLOOMBERG; COURTESY TOYOTA; DON EMMERT/AFP/GETTY IMAGES; TIM RUE/BLOOMBERG; COURTESY FORD MOTOR; COURTESY PORSCHE. *FIGURES ARE AVERAGE WHOLESALE PRICES. DATA: ABR|HEALTHCO ANALYSIS OF MYLAN FILINGS; DRX/CONNECTURE

FIGURES REPRESENT PURCHASES SO FAR THIS YEAR; DATA: J.D. POWER

who in 2013 accounted for 18 percent of Model S registrations; in 2014 it was 22 percent. With the Model X, the gender split of Tesla's customers has the potential to flip. Although women buy only 40 percent of cars in the U.S., they purchase 53 percent of small SUVs and 48 percent of small premium SUVs, according to J.D. Power. "With the S, we might be something like two-thirds male," Musk said earlier this year. "With the X, I think we probably will be slightly majority female."

Early in the design process, Tesla invited a dozen women to its Silicon Valley headquarters for a three-hour focus group led by chief designer Franz von Holzhausen. The participants, most of whom drove minivans or SUVs, were asked what they like and don't like about their vehicles. Among the big issues: safety, a third row, and getting kids in and out of car seats.

Although Tesla says it's wrong to say the features on the Model X stem directly from the group's insights, it certainly listened to women's concerns. "We took the feedback from the focus group and what the core needs and expectations women have with their car and designed something that meets and exceeds expectations," spokeswoman Khobi Brooklyn wrote in an e-mail. So the new SUV has a third row of seats, and its "falcon wing" doors open vertically, giving parents easier access to car seats. There also are more cup holders and storage pockets than on the Model S.

In August more than 889,000 light trucks (which include crossovers and SUVs) were sold in the U.S., compared with 688,000 cars. "Women dominate the crossover SUV segment," says Jessica Caldwell, executive director for strategic analytics at auto researcher Edmunds.com. "Ride height gives a feeling of safety, and having a command view of the road is really important to women. Women are also pragmatic buyers, and SUVs bring flexibility." Small and medium-size SUVs such as the **Porsche** Cayenne, **BMW** X5, and **Audi** Q5 are popular with female drivers.

If the Model X is a big hit, Tesla may face a new challenge: keeping the brand from being so associated with women that it turns off the affluent men who fueled the company's fame. That's not an impossible balance to strike. Porsche has used its "experience center" outside Atlanta, where owners can speed Porsches of every stripe around a Le Mans-style track, to highlight its 911 sports car roots—despite the brand today getting most sales from its mom-friendly Cayenne, Macan SUV, and four-door Panamera sedan. Analysts say Tesla could have an easier time than Porsche maintaining its image as sales shift toward moms because its marketing already pushes safety and technology more than machismo. —*Dana Hull*

**The bottom line** Tesla wants sales of 500,000 vehicles by 2020. To do that, it needs more women, who drew 22 percent of its 2014 sales.

Workplace

## No Place for Old Waiters At Texas Roadhouse?

▶ The EEOC says the chain passes over older job applicants

▶ "We think the most qualified people should get the job"

Maria DeSimone was 40 when she applied for a server job at a **Texas Roadhouse** in Palm Bay, Fla., in 2009. Her family needed more income, so the wife and mother of two, who had two years of restaurant experience, decided to return to work. A manager said he'd get back to her.

He never did, and when she called to follow up on her application, DeSimone was told the restaurant wasn't hiring. She later learned that the 19-year-old daughter of a friend, who'd never worked in a restaurant, got the job.

DeSimone is among 55 women and men named as claimants in a lawsuit against the Texas Roadhouse restaurant chain by the U.S. Equal Employment Opportunity Commission. Brought four years ago in federal court in Boston, the suit says Texas Roadhouse discriminated against workers 40 and older by refusing to employ enough of them in front-of-house jobs as hosts, bartenders, and servers. "We're thinking not just about the case at hand but also about influencing behavior more broadly," says Ray Peeler, a senior EEOC attorney-adviser. Employers, he says, can't assume older applicants don't have "the energy or excitement or whatever trait they're trying to capture." Texas Roadhouse denies the EEOC's allegations.

Age discrimination cases are often about the dismissal of older employees. As more middle-aged and senior men and women seek jobs, according to U.S. Census Bureau data, not getting in the door is a growing problem. "It's harder to prove age bias on the hiring end," says Laurie McCann, a senior attorney at the AARP Foundation in Washington. "When you're applying for a job, you're on the outside and usually don't know who was hired instead of you."

Louisville-based Texas Roadhouse, with more than 450 locations in the U.S. and about 43,000 employees, is fighting the suit, pointing out that servers must line dance during shifts, wear jeans, and work evenings and weekends. In legal filings, the company said even if its policies have "a statistically adverse impact" on older workers, they "are lawful because they are job-related and consistent with business necessity." Still, Carl Van Horn, a public policy professor at Rutgers University, says, "There are certainly older workers who can wear jeans and dance, so it's not a rational defense" to not hire them. ▶

### Never Too Old to Sue

**Google**
Robert Heath filed a class-action lawsuit in April, after the company didn't hire him as a software engineer in 2011, when he was 60. A trial is scheduled for May 2017.

**Hollywood**
In 2002 older writers claimed they were denied work on shows and movies geared to younger audiences. Hollywood studios and TV networks settled in 2010 for $70 million.

**Darden Restaurants/ Seasons 52**
The EEOC sued Darden in February for not hiring enough older applicants for positions at its Seasons 52 restaurants. The case is pending.

**California**
A San Francisco State University lecturer in 2008 sued over being rejected for a job that went to a younger candidate with no Ph.D. The school gave the lecturer $50,000 and emeritus status.

A trial date has been scheduled for January 2017. The suit will test the defense used by many companies that they need younger employees to reflect their brand and attract customers. An EEOC victory would signal that "the prohibition on age discrimination applies to employers across the economy," even those with youthful brands, says Samuel Bagenstos, a professor at the University of Michigan Law School.

The federal Age Discrimination in Employment Act of 1967 outlaws discrimination based on age for those 40 and older, including in hiring, promotions, and layoffs. Age-related discrimination accounts for almost a quarter of the complaints the EEOC receives annually. In fiscal 2014 it logged more than 20,500 such charges, up more than 15 percent from a decade earlier. Grievances peaked at 24,582 in fiscal 2008. In 2009 the Supreme Court made it harder for plaintiffs to pursue age discrimination claims by saying they had to prove that age was the overriding cause of getting dismissed, demoted, or rejected.

Major television networks and Hollywood studios settled more than a dozen suits and paid $70 million in 2010 to older writers who claimed they were unfairly denied work on shows geared to younger audiences. In the mid-1960s, stewardesses employed by U.S. airlines filed sex discrimination charges with the EEOC, targeting bans on getting married and age ceilings. A series of lawsuits prompted airlines to change their hiring practices in the 1970s.

The EEOC alleges that only 1.9 percent of Texas Roadhouse's hosts, bartenders, and servers were 40 or older, compared with 21 percent of employees in similar jobs nationally. It also claims that Texas Roadhouse's job applications show employees in their teens or 20s and that the company talks up its "young, fun, cute, and bubbly people" in training meetings. The lawsuit says some older applicants were told they "wouldn't fit in" or might not be able to keep up, and that the restaurant was looking for someone "young and perky."

At first the EEOC didn't name any older applicants who had been passed over. In July 2012 the federal judge overseeing the case said the agency didn't have enough facts to claim systemic age discrimination. Within about a month, the EEOC amended its suit, naming dozens of claimants, including DeSimone.

Texas Roadhouse says it's hired thousands of older employees for front-of-house jobs. Applicants aren't asked their age, says company spokesman Travis Doster. The EEOC "wants quotas, and we think the most qualified people should get the job," he says.

After applicant DeSimone's rejection, she found a job in a school kitchen. She's been to the restaurant at least once and saw no one her age serving customers. "You're only going to see young people working there," she says.
—*Patrick G. Lee and Carol Hymowitz*

**The bottom line** If the EEOC wins its case against Texas Roadhouse, more employers could be pressured to change hiring practices.

Video Games

# Warner Bros.' Electronic Toy Growth Is No Game

▶ **The studio's interactive unit is outselling big video game rivals**

▶ **"Every game they do is a phenomenal success"**

Batman and Gandalf are battling flying monkeys in Oz. Suddenly, Scooby-Doo comes to their rescue, tooling down the Yellow Brick Road in the gull-winged DeLorean from *Back to the Future*. No, it's not some gamer acid trip, just the latest from **Warner Bros. Interactive Entertainment**. Lego Dimensions, which hits stores on Sept. 27, lets players put dozens of characters such as Superman, the Ghostbusters, and Wyldstyle, the ninja from *The Lego Movie*, on a quest to stop an evil mastermind across 14 themed lands. The characters can use props from the Time Warner unit's stable of movies, comics, and TV shows as well as licensed characters from other partners. (Warner Bros. Interactive licenses the Lego name and uses Lego-style character figures in its game.) "It's all about surprising combinations," says Jon Burton, the game's designer. "People love cameos."

Lego Dimensions is the most recent entry in the hotly contested "toys to life" category, which combines on-screen gameplay with real-world collectible figures that join the video action after being placed

Familiar characters like Homer Simpson abound

onto a base. The company says it's the largest investment yet for Warner Bros. Interactive, just as the 11-year-old gaming unit is becoming a major revenue generator for its parent.

Warner Bros. Interactive was the top video game publisher in the U.S. in the first half of 2015, says Howard Averill, Time Warner's chief financial officer. Titles such as Batman: Arkham Knight and Mortal Kombat X helped its game revenue triple, to more than $500 million, in the quarter that ended in June. "Every game they do is a phenomenal success," says Michael Pachter, a Wedbush Securities analyst. "That's highly unusual in the industry and highly unusual for media companies."

The track record of movie and TV producers in video games has been dreadful. **Viacom** lost more than $260 million on Rock Band, a music-based game it sold off in 2010. **Walt Disney** bled almost $1.7 billion in red ink over seven years at its interactive unit before a downsized version finally turned a profit last year. Even Time Warner's predecessor, Warner Communications, had its troubles, losing $500 million on gaming pioneer **Atari** before shedding the business in 1984.

The key to Warner Bros. Interactive's success is that it lets its seven video game studios make independent decisions about which games they make and doesn't force them to stick to the script of a movie, says David Haddad, the veteran gaming executive who runs the unit. "The best ideas come from the creators," he says.

Last year's Middle-earth: Shadow of Mordor, for example, has an original storyline and a new protagonist, and it's set in a time between the *Hobbit* and *Lord of the Rings* films. "It gives players a chance to play outside the lines that were so established by Tolkien," says Andy McNamara, editor-in-chief of *Game Informer* magazine.

Other movie studios now license their characters to Warner Bros., enabling it to make games such as

Lego: Jurassic World, based on this summer's blockbuster from Comcast's **Universal Studios**. It was the top-selling game in the U.S. in July. Disney's Marvel films have outpunched those based on Warner Bros.' DC Comics characters at the box office recently. But it's still licensed its heroes to its rival for games such as Lego Marvel's Avengers, due in January.

Ruling the "toys to life" category could be much harder, however. A $700 million business in the U.S. alone, the niche is a lucrative one for game makers because they get to sell toys in addition to software. Customers spend an average of $131 on the games and figures, according to researcher NPD Group, twice what the typical game disc costs.

Lego Dimensions is entering a crowded field, one plowed early by **Activision Blizzard** and its Skylanders franchise, which has sold more than $3 billion in games and toys worldwide since its 2011 debut. In addition to the latest version of that game, Lego Dimensions will compete this Christmas with **Nintendo**'s Amiibo line and Disney Infinity 3.0, which this year features *Star Wars* figures for the first time.

Warner Bros. is charging $99 for its new game's starter kit, which includes three figures and the platform that connects them to game systems from **Sony**, **Microsoft**, and Nintendo. Disney charges $65; Activision, $75. One reason the game costs more is the Legos, says designer Burton. There are 269 bricks in the initial Dimensions kit, and they're a critical part of the game. Players who advance to certain levels can reconfigure their Lego model of the Batmobile, for example, to include a ray gun or a blaster that, when placed back on the game platform, unlocks additional powers on the screen.

That blurry line between on-screen and off-screen play may be the future of both toys and video games, analysts say. "For years you had movie video game makers trying to copy what was on-screen. That began to work less and less," says Scott Steinberg, a consultant. "Consumers are more demanding with their experiences." —*Christopher Palmeri*

**The bottom line** Warner Bros.' video game revenue for its last quarter exceeded $500 million, triple that of the previous year.

Edited by James E. Ellis and Dimitra Kessenides
Bloomberg.com

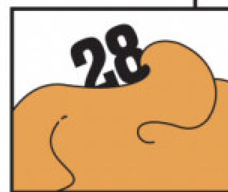


# Briefs

By Kyle Stock

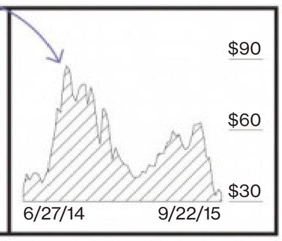
## iCar Green Light

*Apple* said it's accelerating efforts to build an electric or self-driving car, setting a target to ship a vehicle sometime in 2019. The company plans to triple the 600-person team working on the project, known within the company by the code name Titan. Apple has been meeting with officials at the California Department of Motor Vehicles, hiring auto industry insiders, and shifting employees from other parts of the company to the venture. An M&A health kick began paying off for *General Mills*. In the recent quarter, profit at the cereal giant increased 24 percent, to $427 million. Stripping out currency fluctuations, sales rose 4 percent. Half of that growth was attributed to the company's acquisition last year of Annie's Homegrown, a maker of organic snacks and pasta. Gluten-free Cheerios also helped. *Goldman Sachs* CEO Lloyd Blankfein, 61, announced that he's been diagnosed with a form of lymphoma. He described the ailment as highly curable and said he'll continue to work "substantially as normal" while being treated. *Groupon* said it would cut about 1,100 jobs, roughly 1 in 10 workers, as it continues its tough transition away from its daily-deals business model. Most of the trimming will be abroad. Groupon gets 35 percent of its revenue outside North America, but a strengthening dollar has crimped that business. *United Airlines* said it would apply to be the first carrier to fly nonstop between the U.S. and Xian, China, a popular tourist destination far from Beijing and Shanghai. United, which already flies nonstop from the U.S. to four cities in China, wants to start its San Francisco-Xian service next May.




Number of years **Peanut Corp. of America** CEO Stewart Parnell was sentenced to, for his role in a salmonella-tainted-products case linked to nine deaths in 2009. He will appeal the conviction and the sentence.

After a thrilling IPO, **GoPro shares** have had a rough ride. Recently they dipped, yet again, after *Barron's* likened the action camera maker's business model to that of BlackBerry.



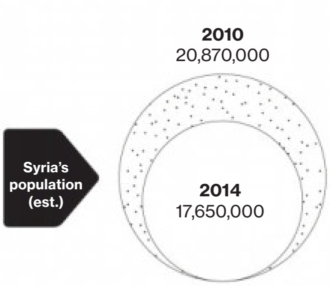

**CEO Wisdom**

**"They're doing good work and quality work, and it raises everyone's game, and it's raised ours as well."**

HBO CEO **Richard Plepler** on competition from new shows by Amazon.com and Netflix

# The U.S. is taking on larger numbers of Syrian refugees from the crisis sweeping through the Middle East and Europe. The costs are high, and there are security concerns. But the influx has potential benefits as well.





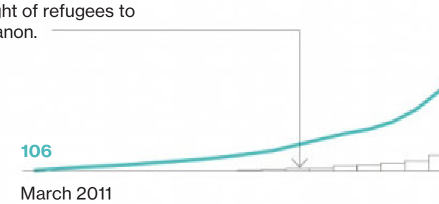

## The Unfolding Tragedy

**April 2011**
Government security forces crack down on protests against President Bashar al-Assad in Deraa, near the border with Jordan, where the first refugees soon appear.

**February 2012**
The Syrian army starts a major offensive on the rebel stronghold of Homs that triggers a flight of refugees to Lebanon.

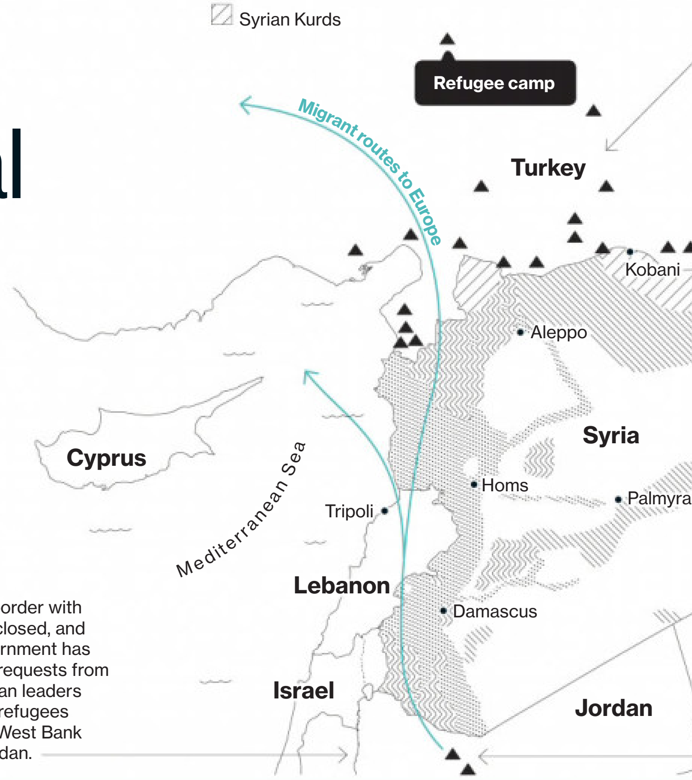
**April 2012**
The United Nations brokers a brief cease-fire in Homs.

**July 2012**
Opposition forces launch assaults on Damascus and Aleppo, Syria's commercial center, driving civilians to Lebanon and Turkey.




## Pouring Across Borders

**Areas of control in Syria's civil war**
Assad regime
Islamic State
Rebels or Jabhat al-Nusra
Syrian Kurds




Israel's border with Syria is closed, and the government has refused requests from Palestinian leaders to allow refugees into the West Bank from Jordan.

By Karen Weise, Justin Sink, and Dave Merrill, with Donna Abu-Nasr, Boris Cerni, Gordana Filipovic, Ben Holland, Dimitra Kessenides, and Balasz Penz

**September 2012**
Refugees riot over squalid conditions at the Zaatari camp in northern Jordan.

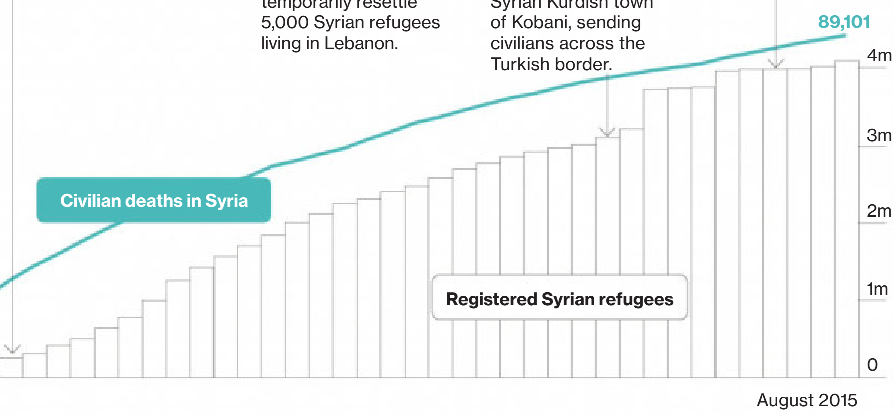
**April 2013**
Islamic State, then an Iraq-based jihadist group, announces plans to expand operations westward into Syria.

**September 2013**
Germany agrees to temporarily resettle 5,000 Syrian refugees living in Lebanon.

**April 2014**
Jordan opens a camp at Azraq, designed to shelter as many as 130,000 refugees.

**October 2014**
Islamic State fighters begin an assault on the Syrian Kurdish town of Kobani, sending civilians across the Turkish border.

**May 2015**
Islamic State seizes control of Palmyra from government forces, scattering 11,000 residents, many of them displaced from other parts of Syria.




REFUGEE NUMBERS BEGIN IN 2012. AUGUST 2015 REFUGEE FIGURE THROUGH AUG. 25;
DATA: VIOLATIONS DOCUMENTATION CENTER IN SYRIA; UNITED NATIONS REFUGEE AGENCY

## The Rising Price of War

In 2014, the cost of the Syrian conflict reached

# $57.3b

Includes loss of economic activity and property, as well as costs of waging war

Governments say they've spent more than ever this year providing basic services to refugees*

**Jordan**
$3b

**Turkey**
$1.5b

**Serbia**
$15.9m

**Slovenia**
$6.5m

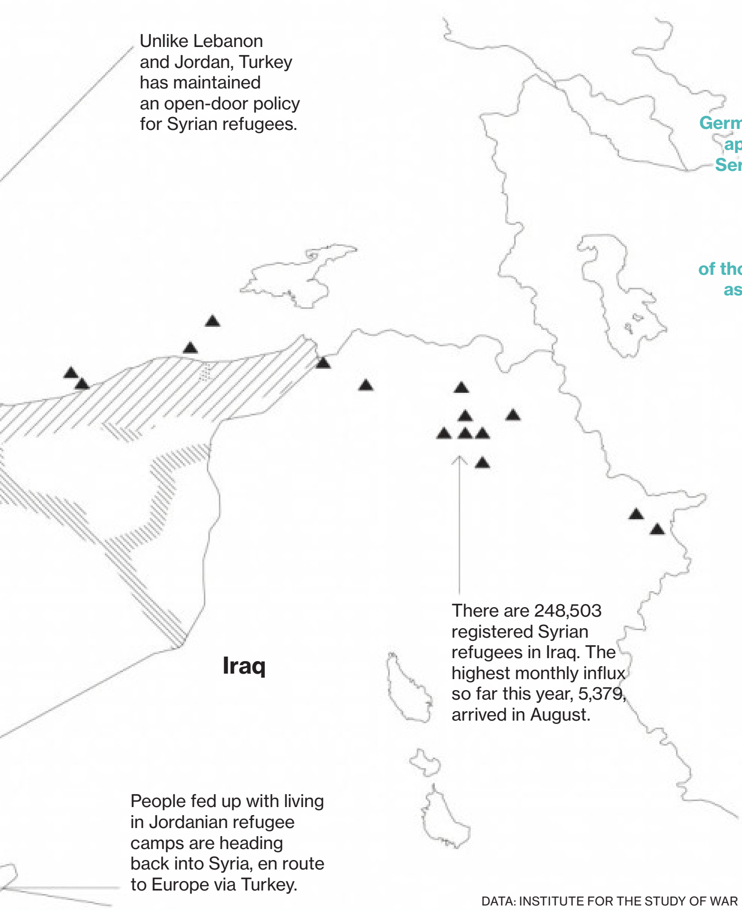
*Lebanon hasn't released figures on the cost of caring for more than 1 million Syrian refugees

The Greek island of Lesvos spent at least

$3.1m

from January to September on more than 150,000 migrants and refugees; that amount doesn't include police and coast guard services, covered by the Greek national government, not the municipality

Unlike Lebanon and Jordan, Turkey has maintained an open-door policy for Syrian refugees.




There are 248,503 registered Syrian refugees in Iraq. The highest monthly influx so far this year, 5,379, arrived in August.

People fed up with living in Jordanian refugee camps are heading back into Syria, en route to Europe via Turkey.

DATA: INSTITUTE FOR THE STUDY OF WAR

Germany, with 108,897 applications, and Serbia, with 77,196, account for

43%

of those who've sought asylum in Europe

## Where the Refugees Are Headed

Out of

4,086,760

registered Syrian refugees,

428,735

have applied for asylum in Europe, according to the UN High Commisioner for Refugees (UNHCR).

The UN agency advocates for refugees globally and provides them support and assistance on the ground

18,000

of the Syrian refugees have been referred by the UNHCR for possible settlement in the U.S., according to the UNHCR and the U.S. State Department.

COST OF THE SYRIAN CONFLICT IS MEASURED IN 2013 U.S. DOLLARS ON A PURCHASING POWER PARITY BASIS
DATA: GOVERNMENT ESTIMATES COMPILED BY BLOOMBERG; INSTITUTE FOR ECONOMICS AND PEACE

**What to Expect in the U.S.**

# 10,000 Syrian Refugees

A higher Syrian quota starting on Oct. 1 is part of an increase in the total refugee admissions cap, to **85,000**, for the 2016 fiscal year. Secretary of State John Kerry says he intends to raise the annual limit to at least **100,000** in fiscal 2017.

**Compared with Europe**

European justice and home affairs ministers have agreed to relocate

**160,000**

refugees over the next two years, dividing them among the European Union's member states

> "It takes longer than one would like, and we cannot cut corners with respect to those security requirements."

—*Kerry, discussing post-Sept. 11 conditions for accepting refugees*



## 2015 so far

U.S. refugee admissions in fiscal 2015 (through August)

Myanmar **13,831**
Iraq **10,898**
Somalia **7,642**
Dem. Rep. of Congo **6,724**
Bhutan **5,208**
Iran **2,502**
Cuba **1,476**
**Syria 1,293**
Ukraine **1,233**
Sudan **1,147**
Eritrea **1,118**
Afghanistan **744**
Burundi **580**
Ethiopia **555**
Colombia **492**
Moldova **319**
Russia **256**
Central African Republic **209**
Rwanda **160**
Pakistan **139**
Palestine **94**
Belarus **93**
Republic of South Sudan **55**
Kazakhstan **53**
Rep. of Congo **52**
Sri Lanka **52**
Uganda **51**
Armenia **45**
Uzbekistan **38**
Vietnam **35**
China **25**
Nepal **20**
Ivory Coast **18**
Azerbaijan **18**
Kyrgyzstan **17**
Chad **15**
North Korea **15**
Yemen **15**
Liberia **12**
Egypt **12**
Georgia **9**
Cameroon **8**
Sierra Leone **6**
Zimbabwe **6**
Tunisia **6**
Angola **5**
Turkmenistan **5**
Kuwait **4**
Gambia **3**
Kenya **3**
Mali **3**
Nigeria **3**
Senegal **3**
Bangladesh **3**
Lebanon **3**
Saudi Arabia **3**
Djibouti **2**
Equatorial Guinea **2**
Guinea **2**
Jordan **2**
Turkey **2**
Namibia **1**
South Africa **1**
Togo **1**
Netherlands **1**
Ecuador **1**
Jamaica **1**
Total: **57,350**

## A History of U.S. Refugee Admissions

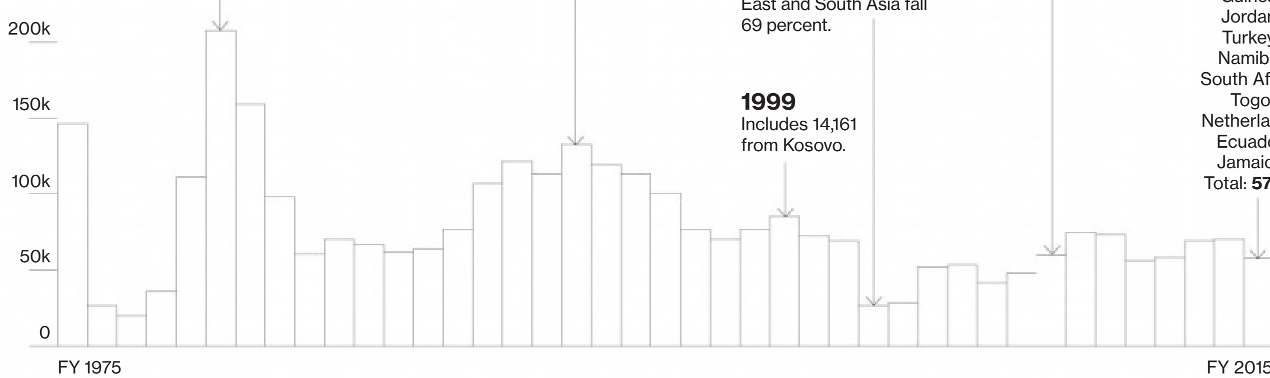
**1980**
Soviet Jews and Southeast Asians make up the bulk of the inflows.

**1992**
Almost half the admissions come from the former Soviet Union.

**2002**
Procedural changes instituted after the Sept. 11 attacks send admissions to their lowest level since 1977. Those from the Middle East and South Asia fall 69 percent.

**2008**
Admissions from Iraq jump to 13,822, up from 1,608 in 2007, as violence in the country escalates.

**1999**
Includes 14,161 from Kosovo.




DATA: U.S. DEPARTMENT OF STATE

## Passage to America

▷ UN staff working in camps vet refugees. Those considered "vulnerable," such as widowed mothers or targets of the Assad regime, are prioritized for admittance into the U.S.

▷ The U.S. Department of State refers candidates to a resettlement support center (the primary ones for Syrians are in Amman and Istanbul), where they get help preparing their applications.

▷ Officers travel to centers to interview applicants, who must also submit to background checks, vaccinations, and health screenings. They also attend a cultural orientation.

▷ Those who have been approved are placed in one of 180 U.S. towns and cities, near family if possible. The State Department offers aid for the first 90 days. Other aid is available for up to five years.

The U.S. spent

$1.1b

in fiscal 2015 to resettle refugees from more than 50 nations.

The whole process can take up to **24 months**. Health screening alone can consume

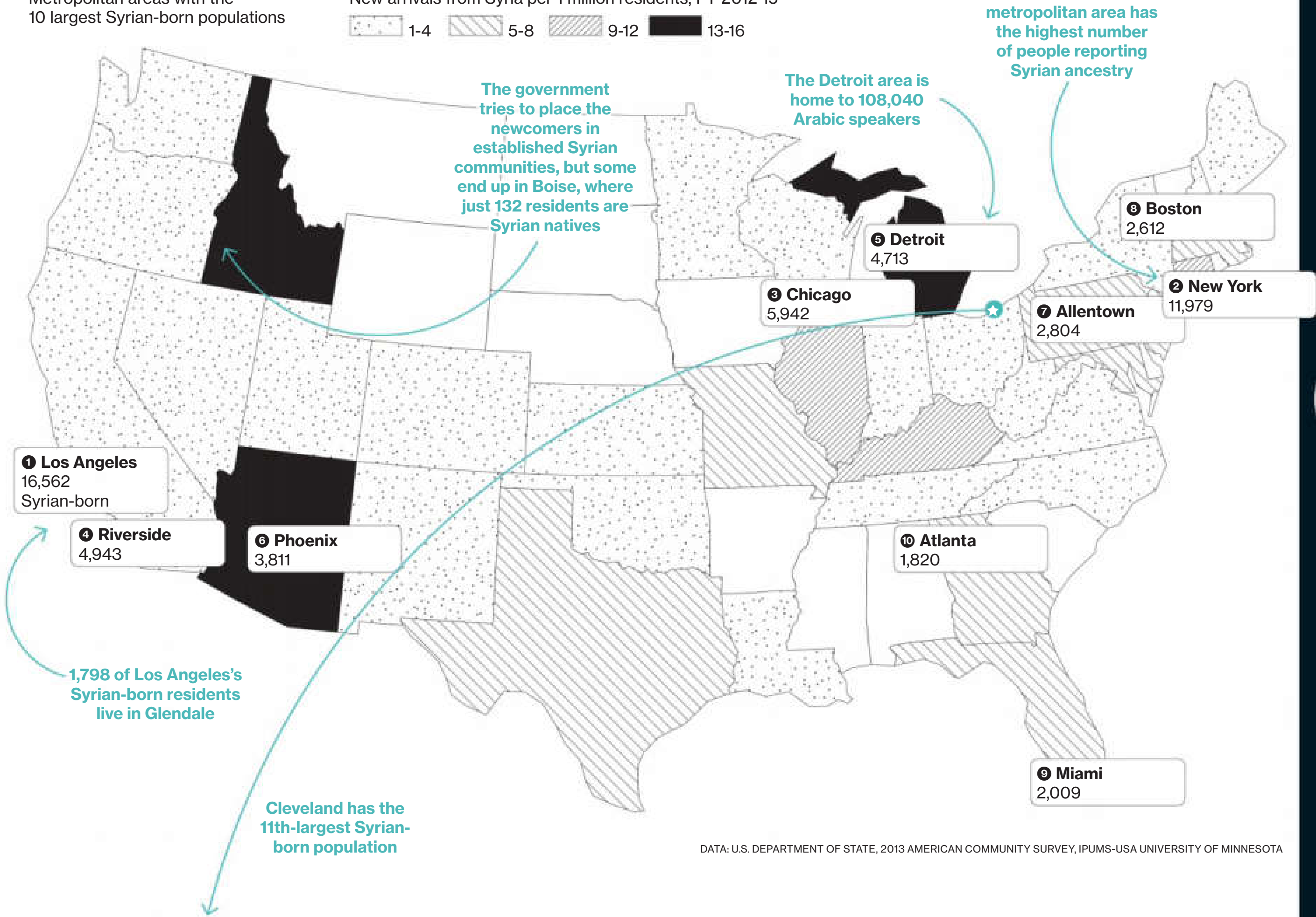
8

weeks, because of the time it takes to do a tuberculosis culture.

## Where the Refugees Are Settling

**By city**
Metropolitan areas with the 10 largest Syrian-born populations

**By state**
New arrivals from Syria per 1 million residents, FY 2012-15




DATA: U.S. DEPARTMENT OF STATE, 2013 AMERICAN COMMUNITY SURVEY, IPUMS-USA UNIVERSITY OF MINNESOTA

## Hope in Ohio

A case study in Cleveland shows how supportive resettlement programs might help stimulate the economy.

**600**
Approximate number of refugees resettled in the Cleveland area in 2012; the total from 2000-12 is 4,518, mostly from Bhutan, Myanmar, Somalia, and Ukraine.

**$48m**
Estimated 2012 direct and indirect economic benefit from refugees, including federal spending to pay for refugee service jobs.

**38**
Number of businesses started by refugees in the Cleveland area from 2002 to 2012. Many hire other refugees.

**$2.7m**
State and local government tax revenue derived from refugee activities in 2012. Almost three-quarters of refugees were employed after two years.

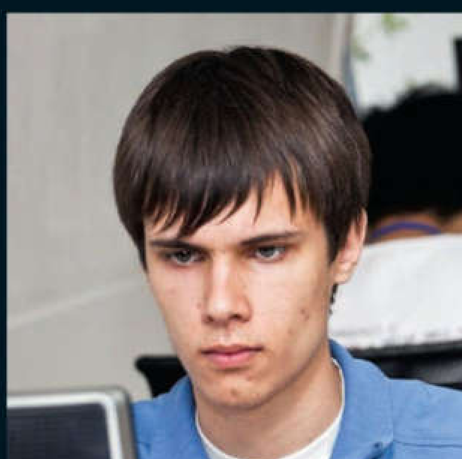
DATA: CHMURA ECONOMICS & ANALYTICS



Edited by Allison Hoffman, Dimitra Kessenides, and Cristina Lindblad
Bloomberg.com

September 28 — October 4, 2015

# THE JORDAN OF CODING



▶ For its stars, sport programming means school and job offers

▶ “We’ve never seen anyone like him”

The grand finale of **Facebook**’s Hacker Cup, held at the company’s Menlo Park (Calif.) headquarters, doesn’t exactly look like the Super Bowl. At four rows of wheeled white desks in a drab, all-purpose event room, about 25 young men—yes, all men—hook up their laptops to big flatscreen monitors and put a notepad and pencil to one side. None of them appear to spend much time at the gym, but all are fierce competitors in the niche world of sport programming.

The Facebook event, like most such contests, consists of a series of logic puzzles that must be solved using the most efficient, fastest-running code. National and international sport-programming competitions have been around since the late 1970s, typically organized by universities and international nonprofits like Unesco. Silicon Valley has begun using them as a farm system only in the past few years. **Google** and Facebook, which began hosting its annual Hacker Cup in 2011, fly in computer-science-minded youngsters from Russia, Eastern Europe, and Asia to face off against locals and one another for cash prizes, enjoy some free sushi, and meet with Valley recruiters.

Hiring from the young coders’ ranks is becoming popular because it pays off, says Vladimir Novakovski, vice president for engineering at investment-software maker **Addepar**. “Every time I have hired someone who is good at these contests, they have crushed the job,” says Novakovski, a former sport programmer who still follows the competitions closely. “They tend to be fast, accurate, and into getting things done.”

In the sport of coding, there’s one clear superstar. At 21, Gennady Korotkevich is ranked No. 1 on both **Topcoder** and **Codeforces**, the two leading websites that organize their own competitions online. In second grade, Korotkevich took second place at a major competition in his home country of Belarus, scoring high enough to gain entry to a top technical university without taking traditional entrance exams. At 11, he placed 26th at the International Olympiad in Informatics (IOI), the sport’s most prestigious high school-level event. He went on to set a record by winning the competition three times. ▶

# Cup Hacks

Contenders at Facebook's Hacker Cup get five puzzles like this to solve in three hours

## ❶ Problem

Mr. Fox is going on a trip to Scotland to witness its many beautiful lochs! He's heard that skimboarding is a fun pastime, somewhat similar to surfing, and he'd like to give it a try while he's there.

He soon finds himself on a flat beach by the side of a loch. The beach can be represented by an infinite 2D plane, with N axis-aligned rectangular pools of shallow water on it. The Nth pool has a pair of opposite corners at coordinates (x1, y1) and (x2, y2). All of the pools can arbitrarily overlap with one another, the result being that there's shallow water everywhere within the union of the pools' rectangles (including right on its edges) and no water anywhere else. (Mr. Fox isn't brave enough to venture into the loch itself yet!)

Mr. Fox would like to get a running start and then launch himself across the water at some location, skimboarding across the pools in a straight line until he hits a point with no water. In other words, his skimboarding debut will consist of a line segment contained within the union of the pools' rectangles (inclusive of borders). What's the maximum length this line segment can have?

## ❷ Code

```
// Fox Lochs
// Problem and solution by Jacob Plachta

#include <algorithm>
#include <cmath>
#include <cstdio>
#include <vector>
using namespace std;

#define LD long double
#define PR pair<int,int>

#define Fox(i,n) for (i=0; i<n; i++)
#define Fox1(i,n) for (i=1; i<=n; i++)
#define Max(a,b) a=max(a,b)
#define Sz(s) int((s).size())
#define All(s) (s).begin ),(s).end )
#define pb push_back
#define mp make_pair
#define x first
#define y second

template<typename T> T Sqr(T x) { return(x*x); }

const LD EPS = 1e-9;

bool Read(int &x)
{
  char c,r=0,n=0;
  x=0;
    for(;;)
    {
      c=getchar();
        if ((c<0) && (!r))
          return(0);
        if ((c=='-') && (!r))
          n=1;
        else if ((c>='0 ) && (c<='9'))
          x=x*10+c-'0',r=1;
        else if (r)
          break;
    }
    if (n)
      x=-x;
  return(1);
}

vector<PR> P;

void Inter(int x1,int x2,int y,int Y1,int Y2,int X)
{
  if ((X<=x1) || (X>=x2))
    return;
  if ((y<=Y1) || (y>=Y2))
    return;
  P.pb(mp(X,y));
}

LD Dist(LD x,LD y)
{
  return(sqrt(Sqr(x)+Sqr(y)));
}

int main()
{
  int T,t;
  int N;
  int i,j,k,c;
  LD ans,s,x,y;
  pair<LD,LD> p;
  vector<LD> cur;
  vector<pair<LD,bool> > E;
  int X1[50],Y1[50],X2[50],Y2[50];
  Read(T);
  Fox1(t,T)
  {
    P.clear );
    //input
    Read(N);
    Fox(i,N)
    {
      Read(X1[i]),Read(Y1[i]),Read(X2[i]),Read(Y2[i]);
      if (X1[i]>X2[i])
        swap(X1[i],X2[i]);
      if (Y1[i]>Y2[i])
        swap(Y1[i],Y2[i]);
      P.pb(mp(X1[i],Y1[i]));
      P.pb(mp(X1[i],Y2[i]));
      P.pb(mp(X2[i],Y1[i]));
      P.pb(mp(X2[i],Y2[i]));
    }
    //find all intersection points
    Fox(i,N)
      Fox(j N)
        if (i!=j)
        {
          Inter(X1[i],X2[i],Y1[i], Y1[j],Y2[j],X1[j]);
          Inter(X1[i],X2[i],Y1[i], Y1[j],Y2[j],X2[j]);
          Inter(X1[i],X2[i],Y2[i], Y1[j],Y2[j],X1[j]);
          Inter(X1[i],X2[i],Y2[i], Y1[j],Y2[j],X2[j]);
        }
    //consider all lines through 2 key points
    ans=0;
    Fox(i,Sz(P))
      Fox(j,i)
      {
        E.clear();
        //vertical line?
        if (P[i].x==P[j].x)
        {
          Fox(k,N)
            if ((X1[k]<=P[i].x) && (P[i].x<=X2[k]))
            {
              E.pb(mp(Y1[k],1));
              E.pb(mp(Y2[k],0));
            }
        }
        else
        {
          s=(LD)(P[j].y-P[i].y)/(P[j].x-P[i].x);
          p=mp(-1e6,P[i].y - s*(P[i].x+1e6));
          Fox(k,N)
          {
            cur.clear();
            y=p.y + s*(X1[k]-p.x);
            if ((y>Y1[k]-EPS) && (y<Y2[k]+EPS))
              cur.pb(Dist(X1[k]-p.x,y-p.y));
            y=p.y + s*(X2[k]-p.x);
            if ((y>Y1[k]-EPS) && (y<Y2[k]+EPS))
              cur.pb(Dist(X2[k]-p.x,y-p.y));
            x=(s*p.x+Y1[k]-p.y)/s;
            if ((x>X1[k]-EPS) && (x<X2[k]+EPS))
              cur.pb(Dist(x-p.x,Y1[k]-p.y));
            x=(s*p.x+Y2[k]-p.y)/s;
            if ((x>X1[k]-EPS) && (x<X2[k]+EPS))
              cur.pb(Dist(x-p.x,Y2[k]-p.y));
            sort(All(cur));
            if (Sz(cur)>=2)
            {
              E.pb(mp(cur[0],1));
              E.pb(mp(cur[Sz(cur)-1],0));
            }
          }
        }
        //line sweep to find ranges covered by rectangles
        Fox(k,Sz(E))
          if (E[k].y)
            E[k].x-=EPS;
          else
            E[k].x+=EPS;
        sort(All(E));
        c=0;
        Fox(k,Sz(E))
          if (E[k].y)
          {
            c++;
            if (c==1)
              s=E[k].x;
          }
          else
          {
            c--;
            if (!c)
              Max(ans,E[k].x-s);
          }
      }
    printf("Case #%d: %.6Lf\n",t,ans);
  }
  return(0);
}
```

Each problem tends to require a fresh twist on a well-known programming concept

The rectangular pools' coordinates go here

This code computes the intersection points of all possible pairs of rectangular pools

This bit assesses the lengths of the lines passing through each pair of rectangle corners and/or intersection points

This computes the two (at most) points of each line that intersect each rectangle, proving they define a segment of the line inside the "rectangle union"

Here, the program identifies the line segments that pass through all the pools at once; the largest must represent the longest line segment within the rectangle union

Here's how the judging works

## ❸ Results

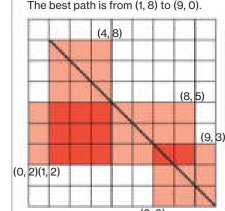
The competitor compiles the program to show his work and also submits a written explanation of the mechanics of his program and how he arrived at the solution. Once both are submitted, the judges review the written explanation, run the program to make sure it works, and factor in how quickly the competitor arrived at the answer and how efficiently the program runs.

Running

CASE #1: 5.830952
CASE #2: 5.000000
CASE #3: 15.000000
CASE #4: 129424.576294
CASE #5: 650595.679101
CASE #6: 8.750000
CASE #7: 406740.250958
CASE #8: 375892.303625
CASE #9: 172942.536512
CASE #10: 131482.402853
CASE #11: 5.000000
CASE #12: 214887.140352
CASE #13: 1439133.979724
CASE #14: 4.242641
CASE #15: 200551.423396
CASE #16: 223308.221962
CASE #17: 261653.376275
CASE #18: 4.242641
CASE #19: 884005.747931
CASE #20: 8.485281

The judges check the program's output

The best path is from (1, 8) to (9, 0).




This is a visual of what the finished code should be able to work out

◀ "Probably the only person making a living at sport programming is Gennady, because he wins so many of the competitions," says Novakovski. "We've never seen anyone like him." The grand prize at the Facebook event is $10,000; between these kinds of in-person events and the online contests he dominates, Korotkevich probably wins upwards of $250,000 a year, Novakovski says.

Korotkevich isn't talkative. At the Hacker Cup in March, he replies to a request for an interview with the words, "We will see," and doesn't respond to messages sent through friends. Sitting calmly at his laptop with a cup of water, he looks a bit like a coding assassin in black shoes, black pants, and black hoodie, waiting rapt for the Facebook organizers to begin the proceedings.

Finally, one of the organizers grabs a microphone. Flanked by cheesy posters with screaming block-letter slogans like "FOCUS" and "BE BOLD," he runs through the rules. Five puzzles, which can be done in any order. Three hours. Keep the programming as efficient as possible. The cleanest, most accurate code in the fastest time takes first place. "May the best coder win!"

The puzzles sound simple—things like finding the shortest route between San Francisco and Los Angeles or the best way to tile a floor in a particular pattern—but tend to require a fresh twist on a well-known algorithm or mathematical structure. Elite sport coders must figure out the underlying logic quickly and trust their abilities. "You have to convince yourself pretty early on that what you are doing will work," says Wesley May, a software engineer at Facebook who helps run the Hacker Cup.

Sport programming isn't exactly riveting to watch. Huge chunks of time tick by without the contestants seeming to move at all. Korotkevich is an exception. As he considers problems, his feet twitch up and down at a rate of several beats per second. He grabs his pencil and twirls it round and round over the back of his hand. He goes for the cup of water. He rubs his chin. Ten minutes in, he begins to type. With feet still kicking around, his hands beat down on the keyboard with the speed of a court stenographer bingeing on meth. He blinks about once every seven seconds.

Shortly before the 20-minute mark, the Belarusian appears to fall behind his longtime rival, Russian native Petr

Mitrichev, when Mitrichev submits his first answer. Korotkevich turns in his first answer five minutes later. It's tough to say who's winning while the clock's running, because although speed is one part of the equation, the judges haven't reviewed the answers yet. Korotkevich seems immune to the intensity of the situation. After 45 minutes of coding, he saunters to the bathroom. The dude is good enough to take time out to pee.

For most of the contest, Mitrichev, who works for Google in Switzerland, looks to be in the lead. The scoreboard at the front of the room shows that he's submitting answers faster than anyone else, although no one knows if the answers are correct. Then, with five minutes to go, Korotkevich surges to first place, as the first person to solve four problems. After the Facebook staff processes the results, Korotkevich is indeed named the winner. While his peers applaud, he allows himself a small smile, then takes off his hoodie and lifts the Hacker Cup, shaped like an upraised black fist, into the air. An hour or so later, Facebook packs all the contestants into buses and takes them on a food tour of San Francisco.

Korotkevich could get a high-paying job at just about any company in Silicon Valley. But he isn't ready to become a professional software engineer. This fall, he's back at Saint Petersburg State University of Information Technologies, Mechanics, and Optics in Russia, preparing for a possible career in science.

Among hard-core puzzle solvers, competitions such as Facebook's Hacker Cup or Google's annual Code Jam are considered relatively minor affairs, a nice all-expenses-paid vacation. (Korotkevich has won the last two Code Jams, too, in Seattle and Los Angeles.) Both companies hold their qualifying rounds online, which, at least for now, is where most of the action is.

Hundreds of thousands of programmers compete on sites such as Codeforces, started in 2010 by a sport-coding coach at Saratov State University in Russia, and Topcoder, launched in 2000 by a veteran of U.S. IT consultancy Tallan. While Codeforces doesn't award contestants prize money, Topcoder, now a subsidiary of IT consultant Appirio, has paid out almost $72 million in contests that can last for hours or weeks. Topcoder problems usually have real-world applications, and when companies buy code from its library, anyone who helped solve the problem gets a cut.

Americans dominated sport coding in its early days, but in recent decades the U.S. has lost that edge. From 1977 to 1997, American teams won the preeminent college competition, known as ICPC, 17 times. Participants included Zappos Chief Executive Officer Tony Hsieh and Google's first hire, Craig Silverstein. Since 1997, the U.S. hasn't won once; Russian and Chinese teams have taken control.

Part of the U.S. teams' troubles may be that sport coding isn't the same academic golden ticket for them that it is in other countries, according to brothers Neal and Scott Wu. "If you do well in these competitions in China or Russia, you don't even have to apply to college," says Scott. "Here, there are kids who do well who are still getting turned down from Harvard."

The Wu brothers grew up in Baton Rouge, La., the sons of chemical engineers who moved to the U.S. from Shanghai in the 1980s. After taking a computer science class in ninth grade, Neal quickly became the U.S. sport-coding champion. In high school, he lost to Korotkevich twice, in 2009 and 2010, during the Belarusian's unprecedented seven-year tenure at IOI. With Korotkevich safely in college, Scott, who took up sport programming after watching his brother's success, won IOI last year.

For the Wu siblings, sport coding has been a means to professional programming. Novakovski, the Addepar engineering chief, has hired both brothers: Scott to work with his team while deferring his acceptance to Harvard for a year; Neal when Novakovski was at community Q&A website **Quora**. Neal now works for file-sharing cloud company **Box**. "The main thing is having a curiosity and a willingness to wade into unknown waters," he says. "When I started, I didn't even know how to write a program to do anything and was just as clueless as everyone else about how computers work. A lot of opportunities opened up because of these contests." —*Ashlee Vance*

**The bottom line** Many sport programmers are landing jobs and prizes. The world's preeminent player hasn't committed to going pro.

Ride Hailing

## Uber Tells Judges to Read the Fine Print

► The company bets on an arbitration clause in a drivers' rights case

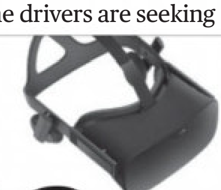
► "Uber is coming hard and fast on this, which is appropriate"

**Uber** says its drivers should enjoy the freedom that comes with setting their own hours, as long as that freedom ends at the courthouse steps. As its California drivers battle to be treated as employees with benefits—rather than independent contractors—the world's most valuable startup is arguing they can't go to trial. According to the contracts most drivers signed, Uber says, disputes have to go through private arbitration.

The company's position has taken on greater importance since a Sept. 1 decision by U.S. District Court Judge Edward Chen in San Francisco. Chen granted class-action status to a lawsuit brought by two Uber drivers seeking reclassification as employees. That means thousands more of the company's 160,000 drivers in California could join the suit. The drivers are seeking ►



Digits



$65m

Funding round announced by **Jaunt** on Sept. 21, making it the first virtual-reality company to raise more than $100 million. The most notable investor: **Walt Disney**.

reimbursement for expenses and tips, which would open the door to a minimum wage, meal breaks, workers' compensation, and unionization. On Sept. 15, Uber asked the U.S. Court of Appeals for the Ninth Circuit in San Francisco to take up "the leading case raising urgent questions about the classification of sharing-economy workers" and reverse Chen's decision.

In its appeal, Uber continues to argue its drivers aren't a class because they don't have set hours or other commitments. It's also urging the appellate court to overturn Chen's ruling in a related case last June, which invalidated the arbitration agreements barring drivers from joining class actions. Uber spokeswoman Jessica Santillo declined to comment on arbitration.

**$7k**

**Daily hearing fee for arbitration firm JAMS**

The fine print in Uber's driver contract includes a clause requiring the driver to take disputes to an arbitrator. If the two parties can't agree on an arbitrator, the mediation service **JAMS** is supposed to play that part. According to the contract language, Uber and the driver would split the costs of arbitration. JAMS charges a hearing fee of $7,000 per day and a $5,000 retainer fee to start the process.

JAMS spokeswoman Victoria Walsh says her firm hasn't handled any cases for Uber. In his June decision, Chen ruled that the arbitration agreements are so unfair they're unenforceable. On Sept. 21, state Judge Ernest Goldsmith came to the same conclusion in a similar case in San Francisco Superior Court.

Uber says the San Francisco case covers fewer than 15,000 of its California drivers, based on Chen's specifications that eligible plaintiffs must have, among other things, stopped driving for Uber before June 2014 or opted out of the arbitration agreement. But it's taking the potential threat to its $50 billion business model seriously, says Katherine Stone, an employment law professor at the University of California at Los Angeles. "Uber is coming hard and fast on this, which is appropriate because it has a lot at stake," she says. Uber is hinging its case on U.S. Supreme Court decisions that have made it "very hard to get out of arbitration agreements anywhere."

Shannon Liss-Riordan, the lawyer representing the drivers, says forcing drivers into arbitration is a "sneaky tactic" to shield Uber from class-action liability resulting from violations of labor laws, "even if they owe a whole lot of people money."

If a higher court upends the class action, many drivers will likely have to pay for lawyers upfront or drop their cases. A win for the drivers would encourage other lawsuits demanding that Uber change its business model and set a precedent for other sharing-economy companies. Liss-Riordan has filed similar suits in California against **Lyft**, courier **Postmates**, food deliverer **Caviar**, and cleaning service Homejoy. The latter shut down operations in August, citing the threat of litigation.

In the Uber case, the most important question remains whether the sharing economy is powered by employees or contractors, but the answer depends on whether drivers have the right to take collective legal action, and whether signing the arbitration agreement cost them that right, says Stone, the UCLA professor. The arbitration issue is being "heavily lawyered," she says, "because each of these are questions that could go either way." —*Joel Rosenblatt*

**The bottom line** Uber is appealing its loss in federal court, arguing that drivers signed away their rights to litigate.

[redacted]

Cloud

## Box Tries a Little Repackaging

▶ **The small file-sharing company is leaning on big partners**

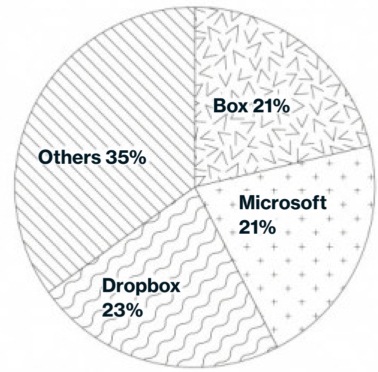
▶ **"I have not seen anyone in this space move as aggressively"**

For better and for worse, **Box** is the No. 2 seller of file-sharing software to businesses—a crowded $892 million market where profit margins are slim. Although Box has exceeded analysts' expectations for two quarters in a row and is on track for about $300 million in sales this year, it's also projected to lose about $200 million, and its shares have fallen below January's initial public offering price of $14. Most people use the free personal version of its software, which gives them 10 gigabytes of storage space, while the typical business user pays $15 a month for unlimited storage and extra features such as security reports and custom branding.

**$892m**
**is the total market size**

**Boxed In**

Business file sharing is small




DATA: IDC

Aaron Levie, Box's chief executive officer, is betting there's a much bigger market lying just out of sight. He's trying to persuade tech industry leaders to use Box as the (or at least a) file-sharing component of their business apps, hoping that leads other companies to build Box into their enterprise software, too. Levie wants to turn Box into an app maker's default tool of choice for the transfer of documents, photos, or videos. "That's a pretty dramatic change in the types of conversations we have with customers, in the types of industries we can go after, in the relevance we can have," he says. "It kind of changes the whole landscape for us."

In June, Levie announced a deal with **IBM** to integrate Box with its data analysis and security software. "Box is a really innovative company that is transforming the cutting edge of ways employees interact," says Inhi Cho Suh, IBM's vice president of strategy for analytics. That deal followed a Levie team-up with **Microsoft** that's allowed users of Office cloud software to save files in Box. **Apple**'s sales teams are pitching Box to business customers, while iOS developers are working with Box to incorporate its file-sharing tools into health-care apps. Apple CEO Tim Cook will appear onstage with Levie on Sept. 29 at the BoxWorks developers conference.

Outside the tech industry, Levie has persuaded companies including **Coca-Cola**, the **National Basketball Association**, and **Creative Artists Agency** to sign agreements to incorporate Box into the apps they use for tasks like procurement and data transfer. ▶

# Innovation

## Minute Phone Charge

**Form and function**
StoreDot says its smartphone batteries can fully recharge in 60 seconds, compared with an hour and a half for the average device.

**Innovator** Doron Myersdorf
**Age** 52
Co-founder of three-year-old startup StoreDot, in Herzeliya, Israel

1.

**Chemistry** Proprietary amino acids, used in place of some of a typical battery's lithium components, allow for safer, quicker charging, StoreDot says.

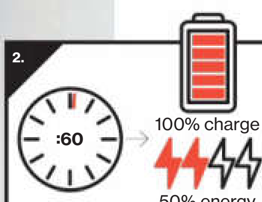
**Origin** In 2012, Myersdorf, formerly of chipmaker SanDisk, and two Tel Aviv University professors stumbled upon the battery compounds while experimenting with flash memory.


**Endurance** StoreDot says its batteries stay in top condition for about 2,000 charges, four times the typical number.

**Funding** Myersdorf has raised $66 million from investors including Samsung's venture capital arm and Russian billionaire Roman Abramovich.

**Price** StoreDot is trying to sell the batteries to phone makers. It says they'll cost 30 percent more than today's models and add as much as $100 to a phone's retail price.

2.




**Results** The minute-charge battery stores about half the energy current batteries do, Myersdorf says. A version that charges in five minutes has capacity equal to standard batteries.

**Next Steps**
Myersdorf says the phone batteries will go into mass production in 2017. He's also working on an electric car battery he says will be able to store a 150-mile drive's worth of charge in five minutes. It takes 30 minutes on a Tesla Supercharger for a Model S to get a similar charge. Veteran Israeli startup founder Zack Weisfeld says the risk-averse auto industry is a tough sell, "but transportation is changing rapidly and there are very big opportunities." —*Yaacov Benmeleh*

◀ Coke started using Box in June after Levie made the tweaks the company needed to work with its software, says Alan Boehme, the soda maker's chief technology officer. "I have not seen anyone in this space move as aggressively," he says. Coke software using Box will include an app to exchange marketing designs with outside companies and possibly one to manage vending machine specifications, according to Boehme.

Several Box engineers spent much of August at the NBA's offices, showing the league's staffers how to work the software into their code. Using Box, the NBA is working on an app that can distribute rough cuts of game video to broadcast partners outside the U.S., says the league's chief information officer, Michael Gliedman. Box is also targeting data-heavy companies in industries such as banking and health care that place a high priority on compliance and security. Those are areas where Box's software is superior to business file-sharing leader **Dropbox** and No. 3 player Microsoft, says Rob Owens, an analyst at Pacific Crest Securities. Dropbox declined to comment.

Levie's efforts to widen Box's purview will likely get a little awkward. The Box CEO is so effusive about Microsoft head Satya Nadella that it's sometimes tough to tell which company he works for. Despite the partnership, Microsoft's OneDrive is Box's biggest competitor for large business contracts, Levie says. Box's new sales strategy will also put it head-to-head against makers of content-management software, including IBM and **EMC**. "It's a very lofty goal, but that's not a bad thing," says Owens. "Things are getting better at Box. They are narrowing the losses and still growing."

Shifting Box's business model toward integration with other apps won't happen overnight, especially because most of its 50,000 business customers haven't heard Levie's new pitch. He says he's aiming to get the company breaking even, at least in terms of cash flow, within a year and a half. "We have some work to do," Levie says. "These are the very initial phases of a very long journey." —*Dina Bass*

**The bottom line** Box is trying to win business with big companies to offset its $200 million in projected annual losses.

Edited by Jeff Muskus
Bloomberg.com

COURTESY STOREDOT (3); ILLUSTRATION BY 731 (1)

1993

**Bill Clinton**
Founder, Clinton Foundation
42nd U.S. President

1997

**Eileen Fisher**
Founder & President
Eileen Fisher, Inc.

2001

**Howard Schultz**
Chairman & CEO
Starbucks

2008

**Jeffrey Immelt**
Chairman & CEO
GE

2011

**Al Gore**
Former U.S. Vice President

2012

**Mary Robinson**
President
Mary Robinson Foundation
– Climate Justice

2013

**Indra Nooyi**
Chairman & CEO
PepsiCo

2014

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# Who's Really At the Controls?

▶ **Overlapping ownership of the airlines by big money managers may affect ticket costs**

▶ **"Precisely the issue one would expect the DOJ to investigate"**

U.S. antitrust officials investigating whether the nation's four largest airlines—**Delta, American, Southwest,** and **United**—colluded to raise ticket prices are examining executives' communications not only with one another but also with investors that hold huge stakes in some or all of the companies. In an official request, the Department of Justice's antitrust division has asked the carriers for details about meetings with major shareholders in which "industry capacity" was discussed.

The DOJ is looking into alleged illegal coordination to control seat capacity, which helps determine ticket prices. Investigators are also studying whether competitiveness suffers when the same group of large investors holds shares in several of an industry's biggest companies. The DOJ's civil investigative demand—similar to a subpoena—doesn't name any investors or individuals or make accusations of wrongdoing. It went to the airlines asking them for information about meeting with investors that own more than 2 percent of at least two of the big four airlines, including **BlackRock**, **JPMorgan Chase**, **Primecap**, **State Street**, **Vanguard Group**, and **Capital Group**, which runs the American Funds group.

Spokesmen for the investment companies declined to comment or didn't respond when asked whether the government had demanded information. "While we can't comment on the DOJ's investigation of the airline industry, we expect fair and ethical competition between the companies we invest in on behalf of our clients," says BlackRock spokesman Ed Sweeney, who added that most of the asset manager's investments are in index and exchange-traded funds that aren't actively managed. A DOJ spokesman declined to comment.

All four airlines confirmed in July that they were cooperating with the government. United declined to comment on the request for information about shareholders. Spokesmen for American, Delta, and Southwest said they were cooperating. Southwest ▶



PHOTO ILLUSTRATION BY 731; PHOTO: GETTY IMAGES

BlackRock's airline holdings are worth $5.7 billion

### It's a Family Affair

Percentage of outstanding shares owned by big investors

| | American | Delta | Southwest | United |
|---|---|---|---|---|
| BlackRock | 4.5% | 5% | 5.4% | 5.5% |
| Capital Group | 3.7% | 3.6% | | 7.9% |
| JPMorgan | | 4.9% | | 5.6% |
| Primecap | | | 11.8% | 5.3% |
| State Street | 3.3% | 3.5% | 3.4% | |
| Vanguard | 5.5% | 5.4% | 5.8% | |

$2.9b

DATA: BLOOMBERG

◀ has made capacity decisions in its own best interests, "without any coordination or collusion with any other airlines," says spokesman Brad Hawkins.

Government antitrust officials have examined an academic study that links shared ownership in airlines to higher fares. The study, co-authored by Martin Schmalz, a finance professor at the University of Michigan's Ross School of Business, examines the correlation between ownership changes and ticket prices of airlines competing on given routes over time. His findings, which he presented to antitrust officials in Washington in September 2014, suggest that ticket prices are 3 percent to 11 percent higher when airlines are commonly owned by similar investors.

While the study found no evidence of collusion, Schmalz says overlapping ownership may give airline executives incentive to refrain from aggressive competition—expanding capacity, for example, or lowering prices—because they know it's not in the interests of their biggest shareholders, which also own stakes in their competitors.

Schmalz says that, in theory, executives could coordinate moves on pricing or capacity by communicating strategy through discussions with big investors. Institutional investors with large stakes in companies often hold discussions with management about business plans and strategies. "Antitrust considerations are generally not on the radar" in such talks, Schmalz and his co-authors wrote, citing correspondence with a former legal counsel for a large money manager.

DOJ lawyers are also examining a recent paper by Harvard Law School professor Einer Elhauge, according to someone familiar with the matter. It argues that investor ownership of competitors across an industry can be challenged as anticompetitive even if overt coordination isn't involved.

The DOJ inquiry, which the government confirmed on July 1, surprised the airline industry because ticket prices have been falling. With discount carriers including **Spirit Airlines** piling on seats, average U.S. domestic coach fares are cheaper than they've been since 2010. Airlines try to match their available seating to travel demand, and when the two are out of balance, they adjust. For example, in 2009, with average domestic fares tumbling 14 percent amid the recession, airlines made the largest cut in available seats since World War II. Executives have for years talked publicly about capacity discipline as a way to ensure they can raise prices.

> "What we do show is that prices are higher because of common ownership."
> —*Martin Schmalz*

Industry consolidation has left fewer airlines for big investors to hold in their portfolios and increases the potential for shared ownership. With ticket prices changing day to day, it's easy for airlines to see what the competition is doing and harder to detect small price changes that may be the result of collusion.

Ownership of companies by asset managers is often seen as beneficial to investors because the big shareholders have leverage to hold management accountable. But when big investors hold overlapping stakes, according to the two papers, it raises the question of whether investors are pushing companies to avoid aggressive competition or playing a role in letting carriers coordinate strategies. "The line is extremely subtle" between an investor conveying an interest in having a company compete less aggressively with others in the same portfolio and having the investor help companies coordinate strategies with one another, says Schmalz.

"If the DOJ has evidence that a few institutional investors either actively or unwittingly are helping airlines raise prices and reduce services, then that's precisely the issue one would expect the DOJ to investigate," says Maurice Stucke, a law professor at the University of Tennessee and a former federal antitrust lawyer. If investigators do find a violation, Stucke believes the government could seek to restrict investors' communications with airlines or to unwind some of their stakes.

Schmalz says that even without collusion, asset managers' acquisition of stock in competing airlines could still be an antitrust violation because the dynamics of overlapping ownership result in higher prices. "We can't rule out that the airlines colluded, but we also don't have evidence for it," says Schmalz. "What we do show is that prices are higher because of common ownership." —*David McLaughlin and Mary Schlangenstein, with Michael Sasso*

**The bottom line** The DOJ is investigating whether large investors encourage airlines to coordinate pricing.

Commodities

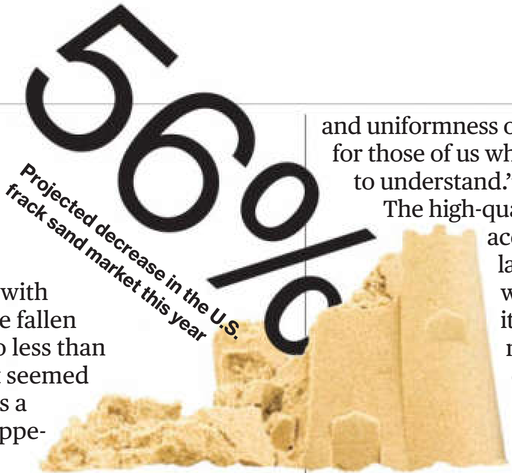
## Oil Crashes, and the Sand Market Follows

▶ Northern Wisconsin suffers as demand dries up

▶ "It's kind of like almost getting your dreams crushed"

New Auburn, Wis., is being battered by the collapse in oil prices. It's not that there's any crude in the desolate outpost carved from the rolling pine tree forests that run into Lake Superior. There are no deposits for hundreds of miles. What New Auburn has is sand, piled in giant mounds. Sand is an essential ingredient in hydraulic fracturing, or fracking, and the shale drilling boom that kicked off in the mid-2000s turned Wisconsin

sand into a hot commodity.




Now oil's collapse has taken the sand market with it. Prices have fallen 31 percent, to less than $40 a ton. "It seemed like there was a bottomless appetite for this product," says Bryce Black, who heads the town board in Frankfort, 90 miles southeast of New Auburn. "People had dollar signs in their eyes."

Tom and Jeff Bischel are among those who'd hoped to cash in. In the winter the brothers pooled their money to open a fast-food joint in New Auburn. They named their ice cream dessert the Sandstorm, a play on Dairy Queen's Blizzard, and designed a 4-foot-tall drive-thru window high enough to serve all the sand-hauling truckers rumbling through town. By the time they opened T&J's Sandwich Station in May, the sand market was in free fall and the area's mines and truckers were scaling back. T&J's business has slumped 45 percent. "It's kind of like almost getting your dreams crushed," Tom says.

Some sand mines in the region have cut their workforces and output in half, according to PacWest, an oilfield-services consulting unit of IHS. Many smaller operations have closed entirely. Overall, the U.S. frack sand market will shrink to $2 billion this year, from $4.5 billion in 2014, PacWest estimates. In New Auburn, **Superior Silica Sands** operates only five days a week. During the go-go days, the company, like so many sand miners across the Midwest, was blasting, cleaning, and shipping out sand 24 hours a day, seven days a week.

The story of Wisconsin sand dates back millions of years. For much of that time, oceans covered parts of the area. The water swept away weaker grains of sand while rounding the remaining ones, according to Kent Syverson, chair of the geology department at the University of Wisconsin at Eau Claire. As the water receded, the land was exposed to wind that refined the particles further. That left strong, round grains. It was perfect for golf courses and glassmakers, and exactly what shale drillers would need to pry open rocks to allow the crude to seep out. "What's so unique about our sand?" Black asks. "The roundness and uniformness of the grain is hard for those of us who are not geologists to understand."

The high-quality sand, easily accessible under a thin layer of earth, together with rail lines to carry it to shale drilling sites, made Wisconsin the center of the sand boom. The state may be best known for its dairy industry, but it's most dominant in the frack sand market, accounting for more than half of all U.S. output. With oil trading below $50 a barrel, drillers aren't as particular about quality. Roundness and uniformity suddenly aren't as important as cost-cutting. Many in Texas's Permian Basin shale region are turning to that state's cheaper brown sand.

To lower expenses, Wisconsin sand miners have targeted trucking costs, closing down facilities that aren't nestled along railroad lines. **Chippewa Sand Transport**, a trucking company, has cut its workforce by 65 percent, to 37 employees. The Bischels, meanwhile, are suffering from the disappearance of truckers in New Auburn. Tom remembers them crossing back and forth constantly as he and his brother—former truck drivers themselves—prepared their restaurant for its debut. "And about a month after we got open," he says, "everything just went downhill." *—David Wethe*

**The bottom line** The price of sand has fallen 31 percent, to less than $40 a ton, as shale oil drilling slows.

Banking

# Bob Diamond Hunts For African Deposits

▶ The Barclays ex-CEO tries to build a cross-continent lender

▶ "The more upbeat you guys get, the lower your stock price goes"

For some, Robert Diamond is a poster boy for all that went wrong at big banks during the past decade. In 2012 he was pushed out as chief executive officer of **Barclays** after the bank was fined more than $450 million for its role in the Libor rate-rigging scandal. Barclays has since been fined more than $10 billion for manipulating currency markets and for other misdeeds. In 2010, a year before he became Barclays CEO, a British government minister called Diamond "the unacceptable face of banking."

Over the past two years, Diamond has been buying African banks in an attempt to build one of the continent's largest lenders. He's not off to a great start. As of Sept. 21 shares in his investment vehicle, **Atlas Mara**, have lost 55 percent since a December 2013 initial public offering. After a decade of strong growth, Africa is slowing down. The commodities boom has collapsed, in part because of weaker demand from China, the continent's biggest trading partner. Sub-Saharan Africa's growth rate will fall to 3.3 percent in 2015, the slowest this century and a "very grim figure for a region often touted as the 'next China,'" John Ashbourne, an Africa economist at Capital Economics in London, wrote in a research note on Sept. 7.

**34%**

**Portion of African adults who have bank accounts**

Diamond, 64, also faces competition from larger players. Togo's **Ecobank Transnational** operates in 36 sub-Saharan countries, and South Africa's **Standard Bank Group** is expanding operations across the region, as are British banks **Standard Chartered** and Diamond's former employer, Barclays. The bets may take a while to pay off. "The whole premise that Africa is growing and that countries will trade more with each other is true," says Ronak Gadhia, a banking analyst at Exotix Partners, a London-based investment bank focused on frontier markets. "But it's not happening at the moment, and it might not happen for at least another 5 or 10 years."

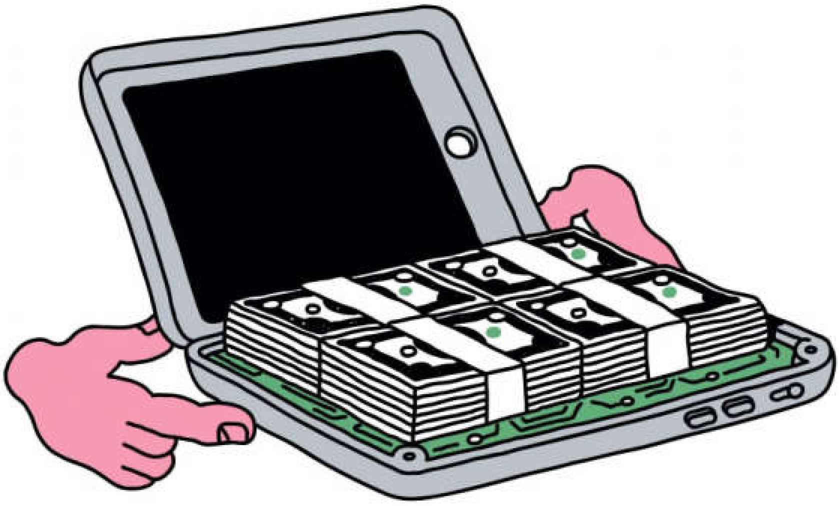
Since Diamond established Atlas Mara with Ugandan entrepreneur Ashish Thakkar, the British Virgin Islands-registered ▶


Diamond

FROM TOP: SUPERSTOCK/IMAGE SOURCE; PATRICK T. FALLON/BLOOMBERG

# Bid/Ask

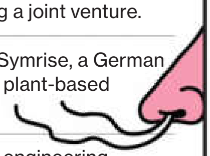
By Kyle Stock



## $4.6b

**Dialog buys Atmel.** Dialog Semiconductor, a British company that supplies chips to Apple's iPhones and iPads, is acquiring Atmel, which makes chips for cars, airplanes, and factories. Apple would account for about 35 percent to 40 percent of Dialog's sales after the deal, according to Credit Suisse, down from about 80 percent now. Dialog's stock fell 19 percent after the announcement of the cash and stock offer.

| | |
|---|---|
| $9b | **Deutsche Wohnen merges with LEG Immobilien.** The tie-up between two of Germany's biggest real estate groups creates the No. 3 landlord in Europe. |
| $3.1b | **Aramco invests in a chemical business.** Saudi Arabian Oil said it would pump money into the synthetic-rubber division of Germany's Lanxess, forming a joint venture. |
| $417m | **Symrise buys Pinova.** The deal gives Symrise, a German fragrance and flavor maker, a batch of plant-based perfume ingredients. |
| $340m | **Meggitt buys plane parts.** The British engineering company snaps up EDAC Technologies, a U.S.-based maker of components for airframes and jet engines. |
| $265m | **FactSet buys Portware.** FactSet, known for its financial data feed, will now be able to sell institutional investors software for managing and automating trades. |
| $234m | **Suncor Energy doubles down on oil sands.** The company bought an additional 10 percent of a Canadian operation from France's Total, boosting its stake to 51 percent. |
| $180m | **Rare Rembrandts return.** The Netherlands and the Rijksmuseum each paid $90 million to repatriate two 1634 portraits from France's Rothschild family. |



◀ company has spent about $500 million buying banks in Nigeria, Rwanda, and Zimbabwe. Diamond says he's planning two or three acquisitions in the next year. "We are good investors, and we are also really good operators," he says. "Taking an investing and operating approach is not only unique, but it is to protect the downside and really, really enhance the upside of our investment."

Diamond's Dubai-based executive team includes CEO John Vitalo, who used to run Barclays's Middle East business, and Brad Gibbs, a former managing director at Morgan Stanley. The goal is to bring banking services to the masses and open branches across a swath of countries. Only 34 percent of African adults have bank accounts, compared with 94 percent of adults in developed countries, according to the World Bank. Within five years, Atlas expects to increase its presence to 10 to 15 countries, from seven, on the way to a "100 percent integrated banking group with a single brand," says Vitalo.

Zoran Milojevic, an analyst at New York-based brokerage Auerbach Grayson who has been covering frontier markets for about 20 years, says Diamond overpaid for his acquisitions, and that his quest to cobble together disparate banks has made Atlas Mara "a hodgepodge mismatch of questionable investments at questionable prices."

Even as they reported a profit for the first half of 2015, Diamond and his team were scolded by shareholders on a conference call in August. "The more upbeat you guys get, the lower your stock price goes," Leon Cooperman, CEO of **Omega Advisors**, a hedge fund, told them. "I have confidence in you. The market doesn't."

Keeping investors on his side will be crucial for Diamond, given that he may have to raise more capital if Atlas Mara is to buy majority stakes in banks in the region's biggest economies, such as Ghana, Kenya, and Nigeria. Says Ayodele Salami, chief investment officer of **Duet Asset Management**, which owns Atlas shares: "They've got a heck of a long journey ahead of them."
—*Stefania Bianchi and Paul Wallace*

**The bottom line** Shares of Robert Diamond's Atlas Mara have lost half their value since the company went public in December 2013.

**Edited by Matthew Philips and Eric Gelman**
**Businessweek.com/markets-and-finance**

BID/ASK ILLUSTRATIONS BY OSCAR BOLTON GREEN

# Success, Shared

## Whether they're building homes, helping veterans or fighting climate change, more and more businesses are leading by example

For Bank of America, corporate social responsibility (CSR) plays a key role in supporting the company's purpose to improve the financial lives of the customers, clients and communities it serves.

"For us, responsible business practices are foundational," said Andrew Plepler, Global Corporate Social Responsibility executive at Bank of America. "We've worked to integrate responsible policies, practices, products, services, governance and employee benefits across our company in order to drive sustainable growth."

Partnerships in the public, private and nonprofit sectors that are committed to positive social and environmental change represent another example of how the company helps create positive impact. In the past year, Bank of America has expanded its Better Money Habits partnership with Kahn Academy to advance financial literacy; helped illuminate the need for an inclusive society through its support of Special Olympics; collaborated with Habitat for Humanity on a global build to increase affordable housing; and supported thousands of veterans and military families through hiring, housing and workforce development.

"When we can bring our size and scale together with the experts in the field, we can help address pressing issues in local communities and around the world," noted Plepler.

On the environmental front, Bank of America has increased its current business initiative to $125 billion in low-carbon business by 2025, which will be met through lending, investing, raising capital, advisory services and developing financing solutions for clients around the world. The company is realizing this goal by focusing on energy efficiency, renewable energy and transportation, as well as areas like water conservation, land use and waste. Additionally, it is a leader in the Green Bond sector and a pioneer in impact investing.

The bank also partners with groups like the Center for Climate and Energy Solutions (C2ES) to sponsor research on key issues, like corporate resilience in response to climate change. The latest C2ES report, "Weathering the Next Storm: A Closer Look at Business Resilience," looks at what organizations are doing to prepare for climate change, and how this is gaining momentum as a strategic priority for companies.

When we can bring our size and scale together with the experts in the field, we can help address pressing issues in local communities and around the world.

"Investors and stakeholders are increasingly informed about how companies address economic, social and environmental issues, and employees want to work for an organization that supports the greater good," said Plepler. "Authentic CSR programs and initiatives contribute to shared success."

At BSR, a global nonprofit network and consultancy that works with businesses on sustainability, there is an appreciation of corporations that lead by example. "Through innovative solutions to complex global challenges such as climate change, human rights and supply chain transparency, corporate sustainability leaders have turned adversity on its head and helped accelerate progress for us all," says BSR's Melanie Janin, Managing Director, Communications.

While sustainability has been a hot topic in boardrooms for years, Janin says another word is becoming just as crucial: resilience. "It is a driver of success in so many ways," she explains. "For companies, resilience is about improving practices, learning from past experiences, being flexible and also taking that awareness to a more successful place."

To drive these points home, BSR has made resilience the theme of its annual conference, which will take place in San Francisco Nov. 3–5. The conference theme, "Resilient Business, Resilient World," emphasizes resilience in leadership, corporations, communities and more. Of course, says Janin, climate change will be highlighted as well. Sessions will focus on climate-related risks to supply chains, setting climate-based goals and accelerating a low-carbon future.

BSR's work—and the work of the sustainable business community more broadly—is to increase the ambition level of businesses when it comes to making a positive impact on social and environmental issues. And that's an idea that every corporation can get behind. ●

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# Farm to Face

▶ A rare plant discovered 16 years ago has led to a line of skin-care products

▶ "I was carrying around my flower and saying, 'Here's the root, look at this!'"

It all began with a mutant flower. In 1999, Mark Veeder noticed a strange green bloom among the purple echinacea plants growing on his seven-acre spread in upstate New York. A Manhattan-based event planner—he's created glitzy affairs for the Oscars and Mercedes-Benz Fashion Week—he also is a lifelong amateur horticulturalist. "In the plant world, green flowers are very rare," says Veeder, who maintains sprawling gardens at his country home.

He sent the flower to top horticultural labs for testing. The results showed he'd discovered a new variety of the standard *Echinacea purpurea*, or purple coneflower, containing a much higher concentration of echinacea's vaunted immune-boosting and restorative properties.

"I knew that I wanted to do more than just breed it and sell it," Veeder says of his discovery, which he patented and trademarked Echinacea Green Envy. He wanted to develop all-natural skin-care and other products to reduce wrinkles and fine lines using the green plant as the principal ingredient. "I didn't want this to just be one of those 'Oh, my grandma made this from granola in a wood stove, and it works,'" he says. "I wanted scientists to extract the echinacea in a way that would make it a more efficacious product."

Farmacy, a line of skin serum, exfoliating cleansers, and lip balms made with Green Envy, was introduced on QVC on Sept. 8. A thousand anti-aging serum bottles sold in eight minutes. And on Sept. 18, Farmacy went on sale in **Sephora** stores across the U.S. The eight-product line, priced from $16.50 for lip balm to $65 for the serum, is on track to reach $6.5 million in sales next year, according to Veeder.

Getting Green Envy out of Veeder's garden, into a bottle, and to consumers took 16 years and more than $1 million, plus connections and a dose of luck. In 2006, Veeder's friend Marcia Kilgore, founder of the **Bliss Spa** chain and beauty line, took him to several international cosmetic trade shows and introduced him to industry players. "I had a plant, but I couldn't say, 'Here's the ingredient, and this is what it does,'" he says. "I was carrying around my flower and saying, 'Here's the root, look at this!'" The response from everyone he met was the same. "OK, come back when you have an actual ingredient." Veeder had success cultivating and selling the plant to nurseries, but by 2007 he decided to put the enterprise on the back burner.

Then in January 2014 he met David Chung, an engineer and the owner of **Englewood Lab** in Englewood, N.J., a manufacturer and distributor of cosmetics for major brands, including Estée Lauder. Chung had developed his own high-end, high-tech skin-care line, 3Lab (it includes a $460 stem cell moisturizer) and was considering starting a line of natural skin products. "It's not unusual to find a new active ingredient," says Chung, who had his chemists test Green Envy. "But you don't find too many unique ingredients with that kind of efficacy."

The pair struck a licensing agreement in May of that year. Chung would be Veeder's main backer, investing an initial $1 million to make products with Green Envy.


Veeder had already poured $100,000 of his own money into the venture, which would eventually be called **Farmacy Beauty**. In December, the pair reformulated their relationship and are now equity partners.

Veeder would handle the marketing and harvesting of the plants. He joined forces with Robert Beyfuss, a retired Cornell agricultural specialist. Beyfuss was cultivating wild Catskill ginseng for a group of Chinese investors on land that was once a private airport in Cairo, N.Y., two hours north of Englewood Lab, but he agreed to devote a quarter-mile of what was once the runway for Veeder to farm the Green Envy plants. Veeder pays him to tend the farm and harvest the flowers.

The affiliation with Chung got Veeder in the door at Sephora. The retailer receives dozens of brand pitches every week, but Green Envy stood out with its American-made back story and what Veeder calls its "farmer-cultivated, scientist-activated" ethos. The prestige skin-care market generated $4.2 billion in the U.S. last year, with natural botanicals the fastest-growing segment.

"Mark did a presentation heavy on imagery of the farm with pictures of seeds and roots and what this could be," says Cindy Deily, Sephora's senior director for skin-care merchandising. She says Veeder's pitch in the summer last year had authenticity. The company, which has a track record of making hit products out of new brands, signed on as ▶

PHOTO ILLUSTRATION BY 731; PHOTO: COURTESY MICHAEL BLOOM/FARMACY; GETTY IMAGES

Farmacy's exclusive retailer.

In the year since, as Chung and his chemists developed the products, Deily and her team worked with Veeder to select a lineup (such as masks and lip balms) and on positioning and branding. "Sephora is good at building a lot of energy and excitement around brands you've never heard of before," says Karen Grant, global industry analyst for beauty at NPD. "It's not unlike them to get involved in a new brand when they really believe in it." Deily was the one who came up with the name Farmacy.

Sephora usually takes a slower approach, rolling out a product in 30 to 50 stores at first. With Farmacy, the full line of eight products hit 140 U.S. stores in early September. Its lip balms and masks will be sold in all 320 U.S. Sephora stores.

> **"I didn't want this to just be one of those 'Oh, my grandma made this from granola in a wood stove, and it works'"**

Veeder says he wants to position Farmacy as an umbrella brand with several all-natural lines based on raw ingredients from around the world. His team is looking at a resin found in the bark of a tree in Somalia with purported healing properties. "Along the way we want to find and support farmers that can be key growers of new ingredients," he says. The long-term goal is to turn the brand's farm-to-face crusade into a worldwide movement. —*Stacy Perman*

**The bottom line** Farmacy, a brand of skin-care products made from a rare echinacea plant, is projected to make $6.5 million in sales in 2016.



Wholesale

## In Arizona, a Chinese-Style Bazaar

▶ PhoenixMart will bring almost 2,000 businesses under one roof

▶ We could "reach more ... customers than we ever could imagine"

Every year, thousands of Americans travel to the sprawling Yiwu wholesale market, about 160 miles from Shanghai, to buy supplies for their businesses, whether it's furniture for a hotel or raw materials to build the furniture. They'll soon be able to find similar one-stop-shopping convenience closer to home.

In Casa Grande, Ariz., a 1.58 million-square-foot facility called PhoenixMart will house manufacturers, wholesalers, distributors, and retailers under one roof. Slated to be finished in mid-2016, the marketplace is designed to fill every conceivable customer need. "Many of the people who have been sourcing in China really just want the convenience China offers and can find that at PhoenixMart instead," says the center's chief executive officer, Steve Gardner, whose previous work as an executive coach and branding specialist has taken him to Asia.

The $150 million development will encompass warehouses and light-assembly facilities, a 95,000-square-foot trade show arena, smaller event spaces, and a high-end restaurant and food court. More than 100 business services will be offered, including logistics and distribution.

This sort of centrally planned business hub already exists in some cities in Asia and the Middle East. PhoenixMart's developers are touting it as the first of its kind in the Western Hemisphere. A third of the center's 1,740 business suites have already been leased, says Gardner, who expects about 50 percent of the lessees to be from North America and the rest from Asia and Europe. Annual rents for the 500- to 600-square-foot units range from $35,000 to $65,000, depending on location.

Among the businesses that have already signed leases is **Supply Chain Solutions**, a seven-employee logistics and freight-management company based in La Crosse, Wis. Executive Vice President Jason Clark says a presence at the center will raise his company's profile. "We have the ability to reach more potential new customers than we ever could imagine," he says.

For Tempe (Ariz.)-based signmaker **Bluemedia**, which helped make the signs for the last two Super Bowls, the opportunity to collaborate with other companies was key to its decision to rent a PhoenixMart suite. "Among all our marketing tactics, we've had the most success building relationships in person," says Darren Wilson, a Bluemedia partner.

The idea for PhoenixMart came to China native Elizabeth Mann in the 1990s when Phoenix's economic development department tapped her to build a Chinese cultural center. She couldn't find the materials she needed in the U.S. and ended up at Yiwu. "Americans have the best products, the best companies, and the best efficiency, but they are less efficient in making the products known to international and national buyers," says Mann.

**PhoenixMart**

**Place** Casa Grande, Ariz.

**Size** 1.58 million sq. ft.

**Developer** AZ Sourcing

**Cost** $150 million

**Product categories** Food and beverage; home and hotel; automotive; office and recreation; electronics; and fashion

"PhoenixMart will provide that needed link to small and midsize companies, so they can focus on making the products."

To spearhead the project, five Arizona developers formed a limited partnership called **AZ Sourcing**, based in Scottsdale. AZ considered sites in 10 states and settled on Casa Grande—a city of 55,000 halfway between Tucson and Phoenix—because the site offered room to grow and easy access to major highways and air and rail connections.

Most of the financing is being supplied by Chinese citizens through the EB-5 Immigrant Investor Program, a federal program that grants foreigners a green card if they invest $500,000 in an American business in an area with high unemployment. AZ Sourcing lined up 300 EB-5 investors who have committed $150 million. The government has released only $40 million of the funds so far because of a backlog in applications. Gardner, who was hired by the developer, says it has bridge-loan offers it can tap to keep construction on schedule.

The developer has a bigger master plan for the 585-acre site. It also envisions hotels, shops, restaurants, entertainment venues, apartments, single-family homes, and a resort. The entire project, dubbed the North American Logistics, Trade & E-commerce City, has a projected $1 billion price tag and would take at least five years to complete.

Frank Lavin, former undersecretary for international trade under President George W. Bush and CEO of **Export Now**, which helps companies break into China's e-commerce market, says he doesn't see the advantages of clustering businesses into a PhoenixMart. "The triumph of digital means that all these services are already in one locale," he says.

James Liu, general manager of **Ming Mao**, a 22-employee Chinese textile

PHOTOGRAPH BY 731

company that is renting space in PhoenixMart, has a different perspective. "Of course, the Internet is a smart way to do business," he says. "But here we can meet face-to-face and, compared to exhibitions that last a week, show our products 365 days a year."
—*Karen Angel*

**The bottom line** A $150 million development called PhoenixMart wants to help U.S. businesses win sales back from China.

E-Commerce

## Not Your Grandma's Knitting Circle

▶ Wool & the Gang is on a quest to make the craft fashionable

▶ "People who make stuff are just naturally a social bunch"

At the back of a dimly lit bar in Brooklyn, N.Y., a group of twentysomething women huddle around high-top tables, laughing and making small talk. All the while, their hands wield wooden needles and tug on chunky yarn.

This September, about 40 knitting parties like this one took place in bars, cafes, and yarn stores in Chicago, London, and San Francisco, courtesy of **Wool & the Gang**. The British e-tailer sells its own brand of premium-priced knitting supplies, along with ready-made sweaters, hats, scarves, and other accessories for men, women, and children. Founders Aurelie Popper and Jade Harwood struck up a friendship while studying textile design at London's Central Saint Martins college and later worked at haute couture houses Alexander McQueen and Balmain. In her native Geneva, Popper met Elisabeth Sabrier, a former model and an occasional knitter. The three started Wool & the Gang (WATG) in 2008 to "change the way knitting was perceived into something that was cool and sexy, not so grandma-ish," says Popper.

Since then the trio has recruited such up-and-coming designers as Giles Deacon, Christopher Raeburn, and Aurélie Bidermann to collaborate on knitwear designs that it sells as make-your-own kits or as finished pieces. Wool & the Gang's e-commerce site is peppered with fashion magazine-worthy shots of young women modeling their own handiwork. What it calls its "global knitwork of gangstas" includes indie celebrities Jemima Kirke of HBO's *Girls* and model/actress Cara Delevingne.

Headquartered in once-gritty, now-fashionable East London, Wool & the Gang employs a full-time staff of 25. The company doesn't disclose financials, but Popper says sales grew more than 300 percent last year, fueled in part by devotees who post photos of their finished pieces and works-in-progress on social media. "People who make stuff are just naturally a social bunch and want to share," Harwood says. "That's why Instagram is our No. 1 channel for posting content and driving brand awareness."

In 2012, WATG's founders decided to tap into their online community to serve those who wanted to own some of the company's designs but weren't interested in taking up needles. "We were seeing people taking pictures of their finished products and thinking, 'Wow, that's so well-made, we could sell that,'" Popper says. Today Wool & the Gang keeps a small inventory of ready-made items in stock but has a reserve army of 3,000 or so knitters who handle on-demand orders. The so-called Gang Makers—mostly women age 25 to 35, many of them college students or young mothers—purchase all the necessary materials at full cost and receive 78 percent of the sale price on each item, some of which range upward of $700. "They almost started their own little niche," says Marcia Patmos, whose knitwear designs for her label, **M.Patmos**, earned her this year's Women's International Woolmark Prize, awarded by an Australian group that promotes the use of wool in high fashion. "There are more companies that are trying that kind of on-demand production, but only a particular kind of company that can be adept enough to do that."

Wool & the Gang also enlists loyalists to host knitting parties like the one in Brooklyn. The events generate revenue—the purchase of a kit is the price of admission—and are a means of recruiting Gang members. The Brooklyn soiree attracted a couple of experienced knitters (one sported a knitted clutch from a previous party), but several newbies also cast on for the first time. Courtney Cedarholm, a fashion designer and Gang Maker, was on hand to pick up dropped stitches and demonstrate new techniques.

Wool & the Gang recently added crochet patterns to its offerings, and its founders have aspirations to create kits for every part of a person's wardrobe, from leather goods to jewelry. The company has turned to Crowdcube, a crowdfunding platform for British businesses, and is almost 90 percent of the way to its goal of raising £750,000 ($1.14 million).

As the night winds down at the Brooklyn bar, some of the partygoers aren't completely won over. Anna Kelly admits that even after several attempts, knitting remains a struggle. "I knitted a scarf once but couldn't figure out how to get it off the needles," she recalls. For those whose resolve appears to be wavering, Cedarholm offers a final inducement: If they post a photo of their progress on Instagram, they could win a $75 WATG gift card to get them started on their next project.
—*Lindsey Kratochwill*

**The bottom line** A U.K. e-tailer that sells knitting kits uses social media to recruit customers to knit made-to-order pieces.

**Wool & the Gang**


**+300%**
Sales growth in 2014

**400**
Designs the company has released

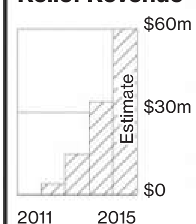
**3,000**
Number of knitters for on-demand orders

**78%**
Portion of the sale price that goes to knitters

# Small to Big

# Optima Tax Relief

In 2011, when Wharton alums Jesse Stockwell and Harry Langenberg founded the company, the tax resolution industry was suffering from a lot of bad press. Several companies in California, Minnesota, and Texas were either under investigation for, or had been charged with, fraud for misleading consumers about their ability to negotiate with the IRS and set up manageable payment plans. The two MBAs, who aren't accountants, decided to turn the mistrust in the industry into an advantage and create a business to help Americans who owe the IRS a lot of money. An initial consultation is free. The fee to start an investigation is $995, and the average total cost for resolving a case is about $4,000. Optima, based in Santa Ana, Calif., started with eight employees and has grown to 330. "To provide tax resolution ethically ... is expensive," Stockwell says. —*Dimitra Kessenides*





Managing our growth has been a continual challenge. You have to take resources away from certain areas and focus them on other areas. So we brought our entire technology development team in-house, and we're a tax resolution firm. Building in-house teams gives us very high quality control and makes us very nimble. Unlike a mortgage servicing business, you have accountants, tax preparers, an investigations team, enrollment agents.

Our legal team is another example—we tripled that in one year. They make sure that our agreements, our protocol, our technology adhere to the highest levels of excellence and security. They're intimately involved with the pulse of the business.

The larger players that were in the industry at the time we started, they charged a very high fee upfront to the consumer, and after the money was paid, very little was done. The consumer didn't have much view into the provision of services. There wasn't a lot of transparency there.

When a customer gets a letter in the mail from the IRS, they're apprehensive, a lot of them are scared. They want to work with a trusted firm. If they have a serious tax problem, they need to be sure it's been vetted properly.

Before someone's even hired, we do everything possible to weed out anyone who doesn't meet our standards. We do a lot of technical interviewing to make sure they know what they're talking about.

Our employees are heavily trained on the proper procedures for handling any tax problem. A consumer knows that we're not going to take your money unless we're sure we can help you. We're not going to enroll you in a resolution program unless we're sure. So consumers know that they're not locked in.


Edited by Cristina Lindblad & Dimitra Kessenides
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# COMPLEXITY MADE SIMPLE

## As cloud technology matures, enterprises that depend on the cloud for new revenue streams need the help of trusted partners to take the next step

Today, it pays to have your head in the cloud. Digital transformation trends are compelling enterprises of all sizes to adopt software-as-a-service (SaaS) solutions at a record pace. And, as companies are challenged to drive innovation, their approach to cloud is often synonymous with their success.

But as cloud goes mainstream across the enterprise, many companies realize they need to step back to take a more strategic approach to get the most out of their cloud investment, as well as avoid common pitfalls in their cloud transformation journey.

They're also realizing that they need to look to experienced vendors who can provide a more complete set of end-to-end workflows of mission-critical applications, coupled with deep knowledge and expertise across industries and lines of business.

For some years now, businesses have been using cloud as an integral part of their software and infrastructure strategy. Early concerns about security and costs quickly gave way to compelling benefits in innovation, as well as new ways of engaging customers, partners and suppliers.

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## THE ROAD TO CLOUD MATURITY

**There are five stages of cloud maturity, each of which comes with its own set of IT tasks—and significant business outcomes**

### Ad Hoc
Change
Refine
Mainstream
Attack

**This approach focuses primarily on the tasks that "keep the lights on"—specifically, the pilot projects that crop up and are driven by the needs of individual decision makers within an organization.**

**BUSINESS OUTCOME**
**At this stage, companies begin to develop a knowledge of the business of cloud computing for immediate, tactical needs. With a newfound appreciation of what it entails, they vow not to be caught flat-footed again.**



Since it's also clear now that strategic cloud adoption can eliminate inefficiencies in business processes, as well as identify new revenue streams, it's no wonder companies want to get on board. A recent report by industry analyst firm IDC, sponsored by SAP, predicts that worldwide spending on public cloud services for businesses will reach $127 billion in 2018. Nearly 80 percent of organizations interviewed want to use cloud, and about 40 percent are already using it to drive their business.

"Cloud users are realizing benefits that impact business directly via agility, simplicity, collaboration and innovation," says Robert Mahowald, Program Vice President at IDC's SaaS and Cloud Services practice.

Typically, cloud adoption begins in ad-hoc ways for most companies, with business units bypassing their IT department to get quick access to SaaS applications for specific needs. However, this approach creates potential security gaps, lack of integration and cloud application sprawl. At best, it leads to customers not fully benefiting from their cloud investments; at worst, chaos.

What needs to happen is a process that IDC says entails five distinct stages before a company achieves the Holy Grail of being a mature, cloud-centric organization. In larger firms aiming to integrate their cloud strategies, the first step is to align the IT and LOB teams across shared business priorities. This collaboration far exceeds any other strategy in helping companies use SaaS to realize and achieve organizational goals.

"Cloud is becoming a primary platform for business as organizations are freed from the constraints of building and maintaining infrastructure and can instead focus on advancing their core business," said Rob Glickman, Vice President, Global Audience Marketing at SAP, one of the world's largest software companies that offers clients a comprehensive portfolio of cloud strategies.

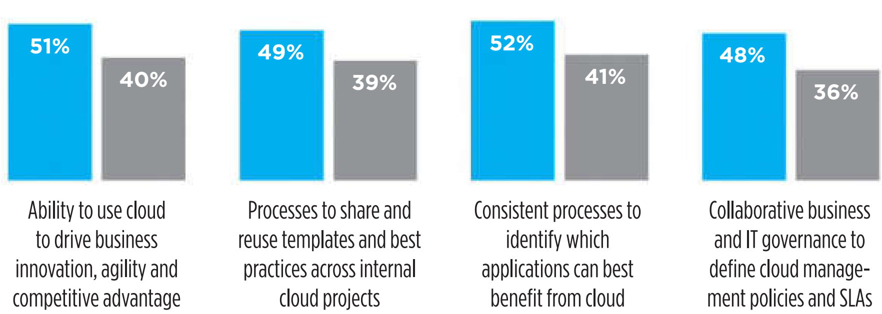
"Business units must partner with IT as their strategic arm to help them serve customers and win," Glickman adds. "Unwieldy silos of multiple SaaS applications create chaos that destroys customer value over time. Put simply, a collaborative approach between IT and the business is the most important element of a mature cloud strategy."

It's worth doing right: According to IDC, organizations whose use of cloud they classify as mature become 10 times better in their allocation of IT staff resources to strategic vs. "keeping the lights on" tasks. That's because maturity in cloud lets them focus on strategy versus day-to-day operations, allowing them to provision new services faster, reduce IT costs and drive more revenue.

While the end goal is clear, the IDC survey shows that many companies are naive about their level of cloud maturity; they typically believe themselves to be one to two stages beyond where they actually are. The key reasons are a significant shortage of skilled IT professionals, and a lack of understanding of the strategic approach, and the business-process changes, necessary to advance to the next level.

## WHICH OF THE FOLLOWING TASKS RELATED TO CLOUD HAS YOUR ORGANIZATION ALREADY IMPLEMENTED?

**Optimized respondents**
**All respondents**




DATA: IDC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THE ROAD TO CLOUD MATURITY

Ad Hoc
**Change**
Refine
Mainstream
Attack

**Businesses begin to scale up access to standardized IT resources via the cloud at increased speed and lower cost. A focus is also placed on app virtualization.**

**BUSINESS OUTCOME**
**This stage inspires buy-in to cloud resources and an acknowledgement that a company-wide approach is needed. As a result, businesses begin to experiment with short-term improvements in access to IT resources via the cloud.**

**27%**

**Time to provision increases by this amount between stage 1 and stage 2**



"It's a wakeup call to these companies that they need partners with skills to route them to their destination," says Mahowald. "Companies that want to develop their use of cloud will most likely be looking to their incumbent software providers for a roadmap to becoming cloud-mature."

### SMOOTHING THE SPEED BUMPS

In addition to cost predictability and ubiquitous access, another overarching attraction for business adopters of cloud has been speed. But as companies evolve in their use of new technologies, and become more mature about cloud use, they've been hitting challenging roadblocks and are looking for help to overcome these hurdles.

"All verticals in the markets that we sell into, and the customers in the Global 2000 and beyond, are dealing with this problem of deploying new types of services to end customers at a high rate of speed," says Brian Emerson, Senior Director of Product Management for Cloud Management and DevOps at BMC.

Emerson points out that, in the past, enterprises had to deal with smaller sets of applications that only required software updates once or twice a year. Today, however, as traditional businesses are transforming into digital enterprises, companies are dealing with hundreds or even thousands of applications, and businesses expect them to be updated on a weekly or daily basis—and in some cases every hour.

**AS COMPANIES MATURE, THEY NEED TO MAINTAIN A SAFE, SECURE AND COMPLIANT IT ENVIRONMENT.**

At first, when businesses needed fast access to infrastructure, speed dwarfed other concerns. And when business units felt that IT departments took too long to deliver, they bypassed them. "Shadow IT was a starting point that served a need, particularly in the test phase, where application teams needed fast access to infrastructure because of the number of releases they were dealing with," Emerson explains.

But as companies transition from an ad-hoc, shadow IT development stage to maturity, the drive for speed has been reined in by the governance and controls that need to be in place when new services are rolled out into production environments.

"As soon as you say, 'Cloud infrastructure and services need to support the end-to-end lifecycle of applications,' then you start caring about things such as governance, controls, security and compliance," Emerson explains. "Once something is released into the production environment, these become critical."

As a result, the whole notion of speed gets turned upside down. Emerson notes that the more mature digital companies are running into a challenge: While they can provision the core infrastructure quickly, the service isn't ready to be made available to business consumers because of the other range of elements that need to be stitched together to make sure the service can be managed in the production environment. This orchestration turns out to be a slow process—something as simple as configuring how and where a server connects into the network—that can hold up deployments, sometimes for weeks.

"BMC found that while only 25 percent of a customer's application deployment time was consumed by the infrastructure provisioning piece, making sure the right processing controls were in place took up the rest," he says. "These things—the orchestration, the IT process integration and thinking about management—consume that other 75 percent of the time it takes to make a service available. The challenge is figuring out how all of that can be automated as part of the total delivery process."

Digital Enterprise Automation, one of the disciplines of BMC's Digital Enterprise Management framework for helping businesses in their digital transformation, delivers a modern automation platform that aims to marry the speed businesses are asking for with proper controls to ensure security for all digital services.

"One of the things we've done with our products is make it possible to automate not just the infrastructure-provisioning piece of it, but also that other 75 percent of the deployment process," Emerson says. "Our premise is that if you figure out how to automate it all, and if you can do that in the right way, then it will really enable the speed and agility businesses are asking for."

Enabling safe deployments is essential. As companies mature, they need to maintain a safe, secure and compliant IT environment in a dangerous, hacker-infested world. Without proper controls, businesses are looking at a Sony or Target magnitude security fiasco waiting to happen all over again.

Emerson says that when a company provisions something to the public cloud,


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## THE ROAD TO CLOUD MATURITY

Ad Hoc
Change
**Refine**
Mainstream
Attack

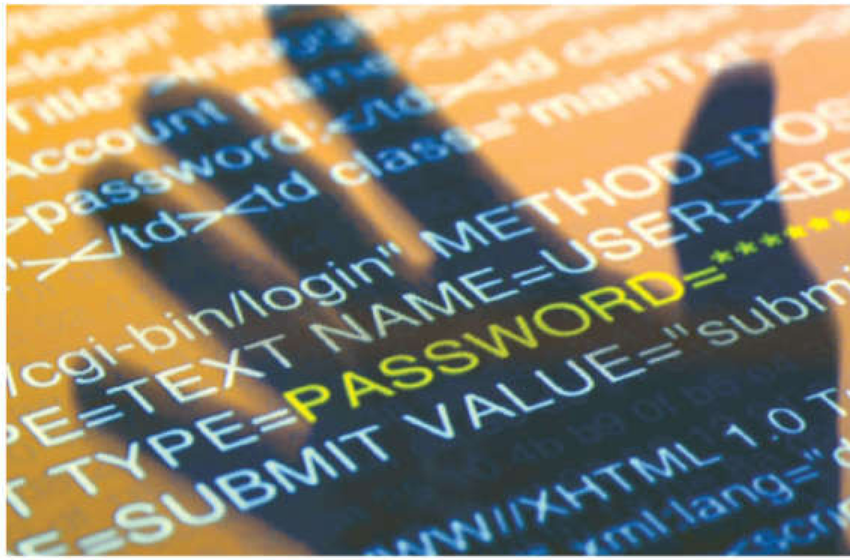
**IT processes become employee-facing, enabling agile access to IT resources through aggressive measurement and standardization. It is at this stage that automation is underway.**

**BUSINESS OUTCOME**
**Now with concrete evidence of the cost and business value of their technology options in the cloud, businesses begin to formalize the coordination between business and IT for external sourcing.**

**29%**

**Businesses that advance to stage 3 experience this reduction in IT costs**






as soon as it is up and running, hackers attack the systems, trying to use things like standardized passwords for application packs as the means to get access.

"If a developer deploys a workload into the public cloud with your company's proprietary code and someone gets access, it can really expose your business," he warns. "So it's become really important that all workloads, whether development or production, are locked down. That's why a lot of customers are starting to have concerns about shadow IT usage; it is starting to expose the overall organization to a massive amount of risk."

What mature cloud businesses want now is greater security, governance and management capabilities, without losing the speed to which they've grown accustomed. Emerson says that BMC's Cloud Lifecycle Management solution offers the speed that development teams want, with a proper governance model that ensures workloads are not exposed to risk when provisioned in the public cloud.

The lower risk high-speed environment that businesses want is possible by using BMC solutions that orchestrate infrastructure automation along with IT process integration. "We enable speed by thinking about all those things that have to happen behind the scenes, once the infrastructure is provisioned to make it available," says Emerson. "It requires a lot of strong automation and orchestration capabilities, and we've developed powerful tools, such as our BladeLogic Datacenter Automation suite, that allow businesses to do advanced server configuration, including comprehensive automation for things like compliance."

Besides focusing on speed as a major component of its toolkit for businesses becoming digitally mature, BMC's macro strategy is built around its Digital Enterprise Management set of products. This portfolio helps IT transform businesses, with disciplines that include not only Digital Enterprise Assurance as discussed above, but also:

**Digital Service Management:** a groundbreaking new paradigm for IT Service Management (ITSM), based on a forward-looking and human-centric view of how IT is transforming employee productivity and driving innovation in the era of digital services.

**Digital Service Acceleration:** combines sophisticated data collection and analytic capabilities with advances in predictive intelligence to give a more complete view of service quality and a dramatic boost in performance and efficiency.

**Digital Infrastructure Optimization:** helps businesses dynamically predict and match service capacity to business needs across a wide variety of digital infrastructure, including servers, virtual infrastructure, private and hybrid clouds and the mainframe.

All of the components of Digital Enterprise Management share an Actionable Intelligence layer that collects and stores IT and business analytics; a Security and Risk Mitigation layer, to protect the company's intellectual assets; and an Open Integration layer that caters to external cloud providers, third-party management services and service providers with products that are agnostic to existing hardware.

For its customer base, which represents 82 percent of Fortune 500 companies,

THE ROAD TO CLOUD MATURITY

Ad Hoc
Change
Refine
**Mainstream**
Attack

Now that IT doubles as a service center, companies at this stage incorporate structure and quantitative performance measurement.

**BUSINESS OUTCOME**
This level of maturation creates business opportunities by using both internal and external cloud assets and weighing risks against rewards. It is expanding a consistent, enterprise-wide best practices approach to the cloud, speeding iterative cycles to increase value to the business unit.

**4%**

Advancing to stage 4 leads to an increase in revenue growth



Emerson says that BMC's competitive message for Cloud Management is what it calls "Trusted Cloud," which centers on the notion that if you want to deliver dynamic cloud infrastructure, you need to do it within the context of how a company thinks about its existing IT processing governance models.

Says Emerson: "By tying fast provisioning with all these other things around IT process integration, management readiness and orchestration, BMC enables you to operate a cloud that can be trusted by your organization to reduce the risk you're exposed to, while still ensuring that you can deliver the speed that your business is asking for."

## A SHIFT IN STORAGE

As they mature in their use of cloud, businesses face the challenges of optimizing their use of storage to get better value, and of handling complex data migrations from their storage solutions to more advanced and cheaper storage.

"Data growth is exploding, so customers are looking for simplicity, better value and a larger return on investment," says Gary Quinn, President and CEO of FalconStor, a software developer at the forefront of the multibillion-dollar industry shift to software-defined storage. "SDS can simplify very complex data management situations, and that's what we find businesses want as they continue to develop their cloud adoption: Simple, easy-to-use solutions."

**"CUSTOMERS ARE LOOKING FOR SIMPLICITY, BETTER VALUE AND A LARGER RETURN ON INVESTMENT."**

In May, FalconStor released FreeStor, a new product that uses a single, hardware-agnostic management interface to simplify data migration, continuity, protection, recovery and optimization for any storage environment. The product was designed with an intelligent abstraction layer that optimizes storage resources—regardless of type, connectivity, brand or speed—to simplify data management and give businesses the ability to control data seamlessly across legacy, modern and virtual environments, including new storage options such as hybrid cloud, SDS and flash memory.

Since its release, FreeStor has been making inroads in targeted markets. One is the flash-hardware manufacturers—Nimble, Kaminario, Pure and others—who need software to complement their hardware products. The company has also seen FreeStor used by service providers that are building and hosting private clouds for Global 2000 customers, and by large enterprises that want to use OpenStack, a VMware competitor. The added value is that there's no vendor lock-in to specific hardware, networks or protocols.

"Over the years, customers have bought from many different vendors in the storage space, and now they find they have a very disparate portfolio of storage silos," Quinn says. "As they marry legacy products from established vendors with flash units, it inevitably causes confusion and inefficiencies. Customers are looking to manage this complex environment as easily as possible, and the best solution is one that doesn't depend on any proprietary hardware."

FreeStor also makes short work of moving data and apps from a customer's disparate legacy environments into other storage, including cloud solutions. "We have 15 years of experience in software and have developed a proprietary, patented technology called MicroScan, a replication de-duplication technology to minimize bandwidth and storage requirements," Quinn says. "It's WAN-optimized, and cost-effective since it's a very efficient data mover across wide area networks."

Adding to its attractiveness, FreeStor comes with a simplified pricing model for data storage: $350 per terabyte per year, or 3 cents per gigabyte per month. "It gives a customer complete flexibility on the type of storage that they buy, the projects that they have, the location they are looking to use and how they pay," Quinn says. "And they only pay us for FreeStor as they grow."

## A SEAMLESS TRANSITION

The ability to cut costs when making a transition to the cloud is likely to drive the growth of providers that provide the full range of services an organization needs to optimize its cloud utilization, says Charlie Burns, VP of Research with IT analyst firm Saugatuck Technology, an ISG business.

"One trend we've seen is a move toward greater use of managed and professional services, both for migrating a workload to a cloud, and then actually operating the applications and workloads on an ongoing basis on the cloud infrastructure," he says.

The reason is twofold. Over the past few years, companies have come to realize that using cloud to its fullest potential requires

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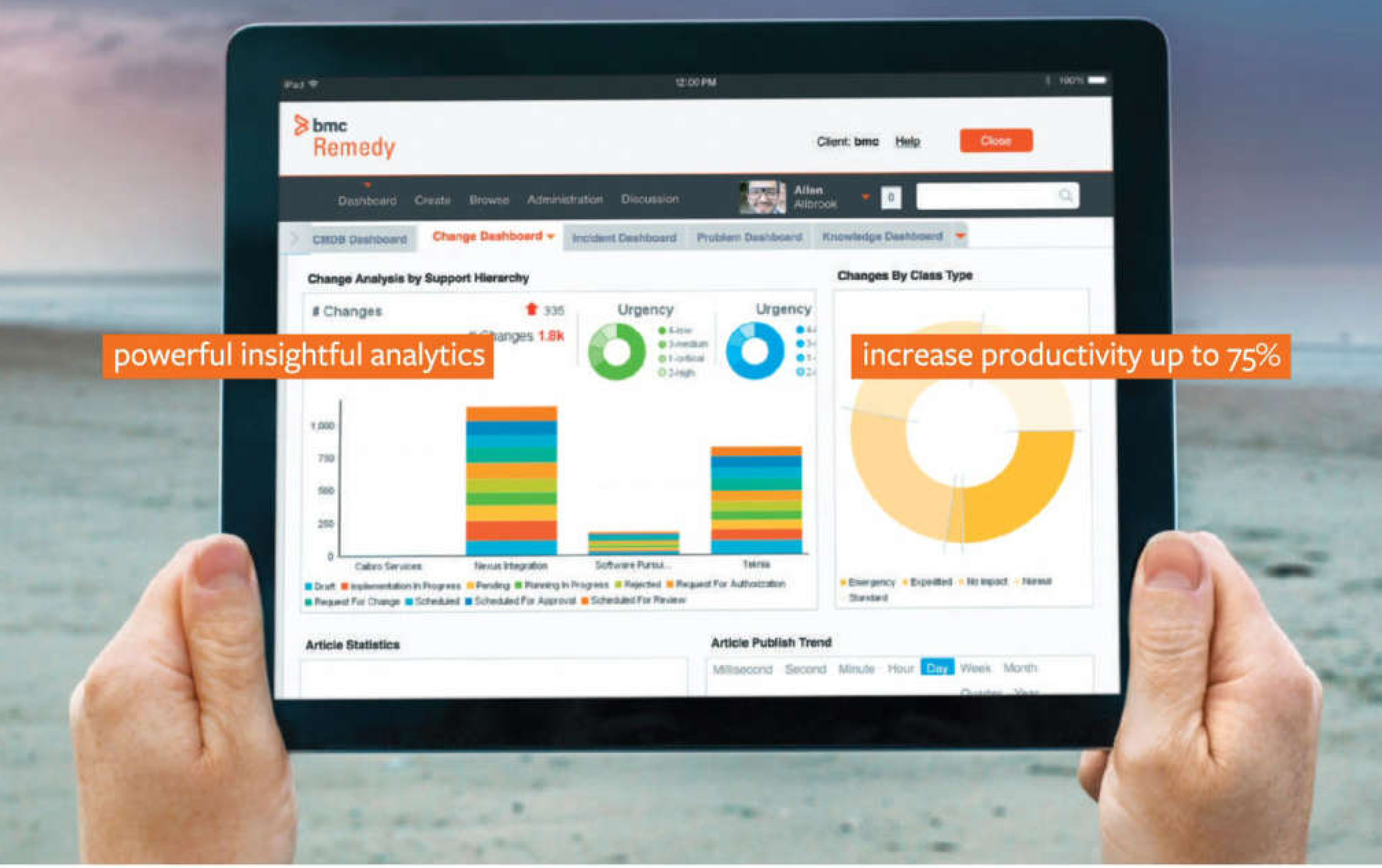


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**THE ROAD TO CLOUD MATURITY**

Ad Hoc
Change
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**Businesses achieve a level of excellence, highlighted by feedback loops that allow for continuous improvement. An internal sourcing structure is driven by clear value to the businesses.**

**BUSINESS OUTCOME**
**Line of business and IT are harmonized, allowing the cloud to drive innovation. With that mastered, businesses can enable managed risk-taking to deliver IT-enabled products and participate in standards development.**

**10X**

**Stage 5 companies are 10 times better than beginners at allocating IT resources to strategic tasks**



a set of skills that their internal IT departments often don't have. Besides the skills shortage, these companies have to adjust the way that they manage the scale and flexibility of cloud. And by choosing cloud providers that also provide managed services, they gain savings by avoiding capital outlay for hardware and software and cure the skills gap at the same time.

"The next step is going to be when IT organizations realize that they literally do not want to be in the business of operating cloud workloads anymore," Burns says. "We already see this trend in mid-sized enterprises that want IT to be strategic and are ready to hand off tactical management to a cloud provider."

It's a trend, he says, that bodes well for companies like Dimension Data, the $7.2 billion global IT solutions and full-service cloud provider that offers public, private and hybrid cloud in 18 data centers on six continents. The company provides customers with a complete range of services—including network integration, security operations, threat management and converged communications, as well as related management and support services—so they can accelerate time-to-value when implementing new products. These types of managed services simplify cloud adoption and mitigate risk associated with the transformation.

"Dimension Data provides a comprehensive set of services they call Cloud Surround™, and their subject matter experts work with customers on how to plan for cloud migration and carry out the implementation of the cloud infrastructure," says Burns. "It's a one-stop shop able to handle whatever the customer wants to do."

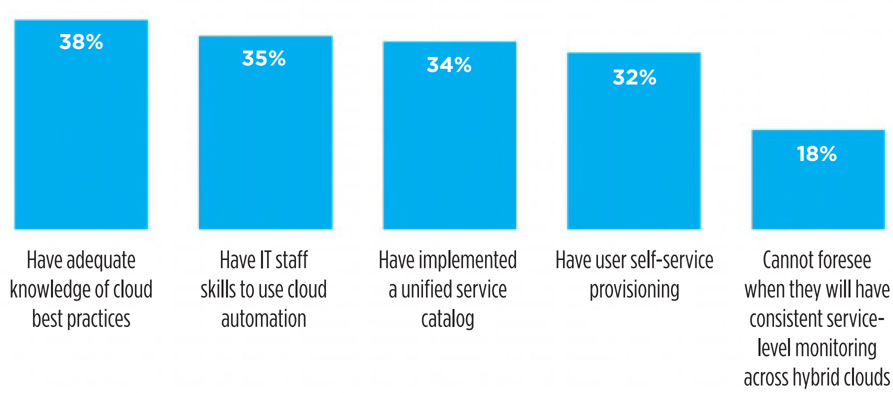
Dimension Data's slogan is "We're hands on so our clients can be hands free." This month, Dimension Data is rolling out what it calls a "right-sized" private cloud solution so that smaller companies, which lack large IT staffs and budgets, can take advantage of the benefits provided by a dedicated cloud. Dimension Data can implement a private cloud in the customer's data center, or in any off-premises data center, and then manage it remotely for them. In a sense, IT becomes the cloud services provider.

Ultimately—as the complexities of achieving maturity in the cloud become more apparent, and as cloud service providers offer more in terms of savings and assistance—for many companies, the journey to optimize their use of cloud technologies is likely to end up being a "hands-off" approach.

"Since it saves companies money, and allows slimmed-down IT departments to become innovative, customers will realize that this is what they need to do," Burns concludes. "That shift will lead to a dramatic increase in the amount of managed services they use, and that's the trend we're seeing emerge now." — *John O'Mahony*

## BRIDGING THE IT SKILLS GAP

**Nearly 90% of customers have a "strong desire" for building a hybrid cloud organization in the next two years, but there exists a 50% skills gap for most organizations to achieve their goals. Specifically:**

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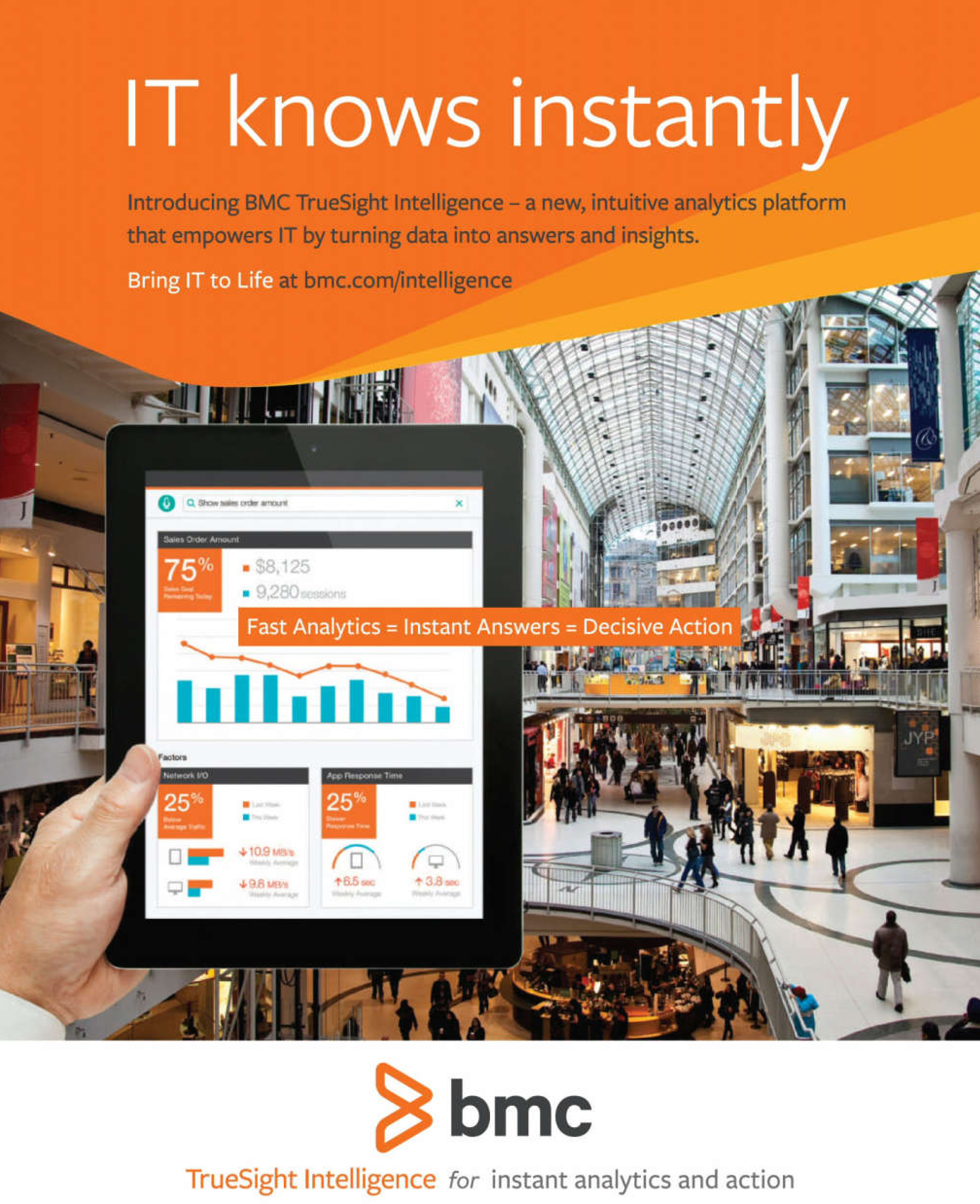

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Factors
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9.8 MB/s
App Response Time
25%
6.5 sec
3.8 sec
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Marketers thought the Web would allow perfectly targeted ads. Hasn't worked out that way

# How

# Of Your

# Is

# Much Audience Fake?

By Ben Elgin, Michael Riley, David Kocieniewski, and Joshua Brustein

Ron Amram has been in the brand marketing business for about 20 years. In the 2000s he was media director for Sprint's prepaid cellular group, mainly figuring out where the carrier should spend its ad dollars—print, outdoor, digital, or broadcast. TV was always at the top of the pyramid. A TV campaign was like "the Air Force," Amram says. "You wanted to get your message out, you did carpet bombing." But TV wasn't cheap, nor did it solve "that age-old question: Half of my marketing is working, half of it is not, and I don't know which half."

About 10 years ago, not long after Google went public and Yahoo! was still worth upward of $50 billion, attitudes shifted. Digital search and display ads had the potential to reach TV-size audiences at a fraction of the price. "People thought it was going to change everything," Amram says.

The euphoria escalated again around 2010 with the arrival of programmatic advertising, a typically banal industry term for what is, essentially, automation. The ideal programmatic transaction works like this: A user clicks on a website and suddenly her Internet address and browsing history are packaged and whisked off to an auction site, where software, on behalf of advertisers, scrutinizes her profile (or an anonymized version of it) and determines whether to bid to place an ad next to that article. Ford Motor could pay to put its ads on websites for car buffs, or, with the help of cookies, track car buffs wherever they may be online. Ford might want to target males age 25-40 for pickup-truck ads, or, better yet, anybody in that age group who's even read about pickups in the past six months.

> "I can think of nothing that has done more harm to the Internet than ad tech"

That's a stunningly attractive proposition to advertisers: surgical strikes on a carpet bombing scale. Ominous for privacy advocates, sure, but nirvana for agencies, publishers, and advertisers. At long last, they'd know where every last dollar went and whether it did its job.

Amram is at Heineken USA now, where the annual ad budget is in the $150 million range. In 2013 the company replaced its old stubby bottles with a fashionably longnecked version that supposedly keeps the beer cold longer. "We had a healthy investment in TV, local media, and digital," he says. "We thought digital would come close and compete with television in terms of effectiveness."

Late that year he and a half-dozen or so colleagues gathered in a New York conference room for a presentation on the performance of the online ads. They were stunned. Digital's return on investment was around 2 to 1, a $2 increase in revenue for every $1 of ad spending, compared with at least 6 to 1 for TV. The most startling finding: Only 20 percent of the campaign's "ad impressions"—ads that appear on a computer or smartphone screen—were even seen by actual people.

"The room basically stopped," Amram recalls. The team was concerned about their jobs; someone asked, "Can they do that? Is it legal?" But mostly it was disbelief and outrage. "It was like we'd been throwing our money to the mob," Amram says. "As an advertiser we were paying for eyeballs and thought that we were buying views. But in the digital world, you're just paying for the ad to be served, and there's no guarantee who will see it, or whether a human will see it at all."

Increasingly, digital ad viewers aren't human. A study done last year in conjunction with the Association of National Advertisers embedded billions of digital ads with code designed to determine who or what was seeing them. Eleven percent of display ads and almost a quarter of video ads were "viewed" by software, not people. According to the ANA study, which was conducted by the security firm White Ops and is titled *The Bot Baseline: Fraud In Digital Advertising*, fake traffic will cost advertisers $6.3 billion this year.

One ad tracked in the study was a video spot for Chrysler that ran last year on Saveur.tv, a site based on the food and travel lifestyle magazine. Only 2 percent of the ad views registered as human, according to a person who was briefed on data provided to the study's participants. Chrysler, which doesn't dispute the data, ceased buying ads on the site once it became aware of the "fraudulent activity," says Eileen Wunderlich, the automaker's spokeswoman. White Ops, which left out the names of the advertiser and website in its published study, declined to comment. Executives at Bonnier, the publishing company behind Saveur.tv, say they screen every impression and that the White Ops study looked at 5,700 ads, a very small number. They also say there are multiple methods for detecting nonhuman traffic, and that there's no single standard used by the industry. "We weren't aware of any problem or complaint. If it had been brought to our attention we would have fixed it," says Perri Dorset, a Bonnier spokeswoman.

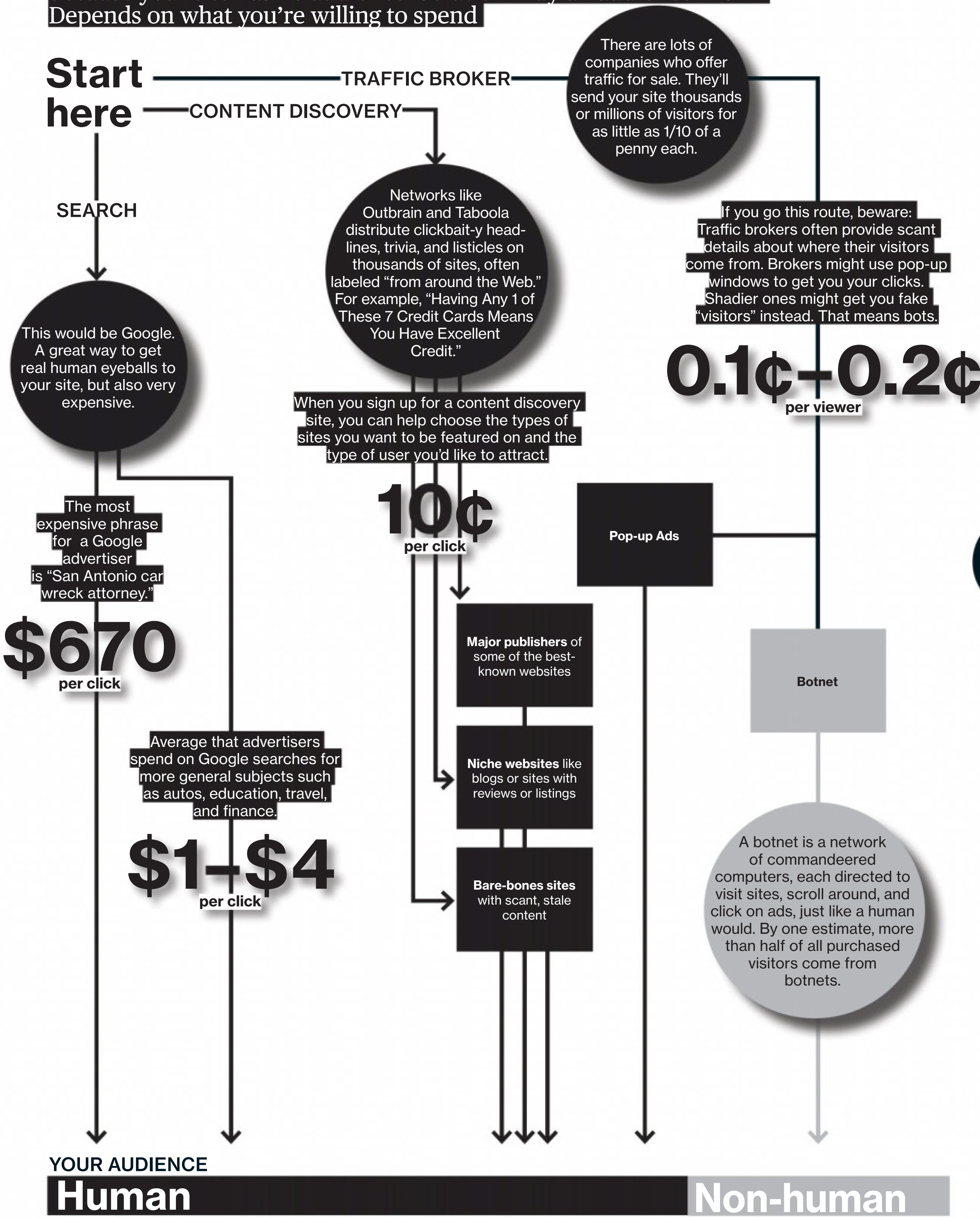
Fake traffic has become a commodity. There's malware for generating it and brokers who sell it. Some companies pay for it intentionally, some accidentally, and some prefer not to ask where their traffic comes from. It's given rise to an industry of countermeasures, which inspire counter-countermeasures. "It's like a game of whack-a-mole," says Fernando Arriola, vice president for media and integration at ConAgra Foods. Consumers, meanwhile, to the extent they pay attention to targeted ads at all, hate them: The top paid iPhone app on Apple's App Store is an ad blocker.

"I can think of nothing that has done more harm to the Internet than ad tech," says Bob Hoffman, a veteran ad executive, industry critic, and author of the blog the Ad Contrarian. "It interferes with everything we try to do on the Web. It has cheapened and debased advertising and spawned criminal empires." Most ridiculous of all, he adds, is that advertisers are further away than ever from solving the old which-part-of-my-budget-is-working problem. "Nobody knows the exact number," Hoffman says, "but probably about 50 percent of what you're spending online is being stolen from you."

Bonnier is a 211-year-old Swedish media conglomerate. Like a lot of traditional publishing companies, it has struggled in its transition to the Internet era. Generating digital revenue to offset declines in the print business is paramount, and video ads are particularly lucrative. Last year the company began to build videocentric sites for *Saveur* and several of its other titles, including *Outdoor Life*, *Working Mother*, and *Popular Science*.

# So You'd Like to Get Some Traffic

You're launching a website. Problem: Advertisers won't talk to you because your site has no audience. Solution: Buy an audience! How? Depends on what you're willing to spend



About half of Saveur.tv's home page is taken up by a player that automatically plays videos with simple kitchen tips. In early September, the spots (How to Stir a Cocktail, Step One: "Hold the spoon between pointer and middle finger ..."), were preceded by ads from Snapple and Mrs. Meyer's household cleaning products.

The challenge for Bonnier was building an audience. That can be done organically—by coming up with lots of content, promoting it until people start watching, persuading advertisers to buy in. Or there's a modern shortcut: Buy traffic. Which doesn't necessarily mean fake it. Publishers often pay to redirect human users from somewhere else on the Internet to their own sites, and companies such as Taboola and Outbrain specialize in managing this kind of traffic. Website A hires Taboola, which pays Website B to put "content from around the Web" boxes at the bottom of its pages. Viewers, enticed by headlines like "37 Things You Didn't Know About Scarlett Johansson," click on a box and are redirected to Website A. But redirects are also expensive. In practice, only 2 percent of people on a site click on these boxes, and Website A has to compensate Website B handsomely for giving up precious visitors.

Less ethical methods are cheaper. Pop-ups—those tiny browser windows that you ignore, click to close, or never see—are one way to inflate visitor numbers. As soon as that window appears on your computer, you're counted as someone who's seen the ads. An even more cost-effective technique—and as a rule of thumb, fake is always cheaper—is an ad bot, malware that surreptitiously takes over someone else's computer and creates a virtual browser. This virtual browser, invisible to the computer's owner, visits websites, scrolls through pages, and clicks links. No one is viewing the pages, of course; it's just the malware. But unless the bot is detected, it's counted as a view by traffic-measuring services. A botnet, with thousands of hijacked computers working in concert, can create a massive "audience" very quickly.

"I've found Advertise.com selling every type of worthless traffic I am able to detect"

All a budding media mogul—whether a website operator or a traffic supplier—has to do to make money is arbitrage: Buy low, sell high. The art is making the fake traffic look real, often by sprucing up websites with just enough content to make them appear authentic. Programmatic ad-buying systems don't necessarily differentiate between real users and bots, or between websites with fresh, original work, and Potemkin sites camouflaged with stock photos and cut-and-paste articles.

Bonnier wasn't that audacious. But even its own executives say the content on the video sites was unlikely to create and sustain much of an audience on its own. So they turned to several different traffic brokers—or audience networks, to use the industry euphemism. Sean Holzman, Bonnier's chief digital revenue officer, described the practice as normal for big-time publishers, especially those rolling out new products, because advertisers won't bother with sites that don't already have an audience. "It was a test, a way to prime the pump and see if we could build these sites at this price point," he says. "You usually have to keep buying some traffic, because the audience you're getting isn't as sticky."

It's also common for publishers not to tell their advertisers when they're buying traffic, and in most cases, Bonnier didn't. When advertisers asked, says spokeswoman Dorset, the company was open about its buying traffic. Holzman says there was no intent to deceive anyone. The company hired security firms, he adds, including DoubleVerify, to vet the sites for bots and was assured they were buying real human visitors. But he says they weren't paying top dollar for their traffic. Among audience networks, he says, "there are some you might call Toyotas, others we'd consider Mercedes. We were priced at the Toyota level."

The traffic market is unregulated, and sellers range from unimpeachable to adequate to downright sleazy; price is part of the market's code. The cheap stuff is very easy to find. On LinkedIn there's a forum called "Buying & Selling TRAFFIC," where 1,000 "visitors" can be had for $1. Legit traffic is a lot more expensive. Taboola, for example, charges publishers from 20¢ to 90¢ per visitor for video content, targeted to a U.S. audience on desktops only. A publisher like Bonnier can sell a video ad for 1¢ to 1.2¢ per view in a programmatic auction, which is how the company sold most ads on its video sites. If Bonnier had gone with Taboola, it might be losing 19¢ per view or more.

Soon after it started buying traffic, Bonnier's numbers began to jump. In the summer of 2014, several of the video sites had almost zero visitors, according to ComScore. By December, Saveur.tv had 6 million monthly visitors and WorkingMotherTV.com, 4 million, according to site data provided by Bonnier. In May traffic surged again: 9 million for Saveur.tv; 5 million for WorkingMotherTV.com. The numbers didn't pass muster with at least one big ad exchange: SiteScout, which aggregates and lists ad space for sale from more than 68,000 websites, says it blocks several of these new Bonnier sites for "excessive nonhuman traffic." Bonnier says it doesn't work directly with SiteScout and was unaware its video properties had been blocked.

(Bloomberg.com, which like *Bloomberg Businessweek* is owned by Bloomberg LP, reported 24.2 million unique visitors in the U.S. in August, according to ComScore. The site purchases between 1 percent and 2 percent of its traffic from Taboola and Outbrain. "In the past, we have engaged with a few other vendors," says global head of digital Paul Maya, "but we weren't confident in the quality of the audience, despite assurances from the vendor, and canceled those deals.")

Bonnier declined to reveal its traffic suppliers, but an analysis by SimilarWeb, a traffic-analysis firm, shows most of it arrived from a handful of identical-looking sites with names like Omnaling.com and Connect5364.com,

each describing itself as "an advertising network technology domain." Essentially the domains work like fire hoses, pumping traffic anywhere on the Internet. They're registered anonymously but have shared computer addresses with other sites, including one called Daniel-Yomtobian.com. Daniel Yomtobian is the chief executive officer of a traffic supplier in Sherman Oaks, Calif., called Advertise.com.

When reached by phone, Yomtobian is gregarious and friendly. He describes Advertise.com as an ad network that sells more than 300 million page visits each month to companies that want to boost their traffic. Among his customers is Bonnier, which, he says, mainly purchased his cheapest-possible traffic, including "tab-unders." Say you're watching a movie on Netflix. A tab-under opens up another window beneath the one playing the movie. You may never see that new window, which displays an Advertise.com customer's website, but Advertise.com's customer still generates another page view. Repeat a few thousand times, and you build traffic numbers.

"I've found Advertise.com selling every type of worthless traffic I am able to detect," says Benjamin Edelman, a Harvard Business School professor who researches the digital economy. "And doing so persistently, for months and indeed, years."

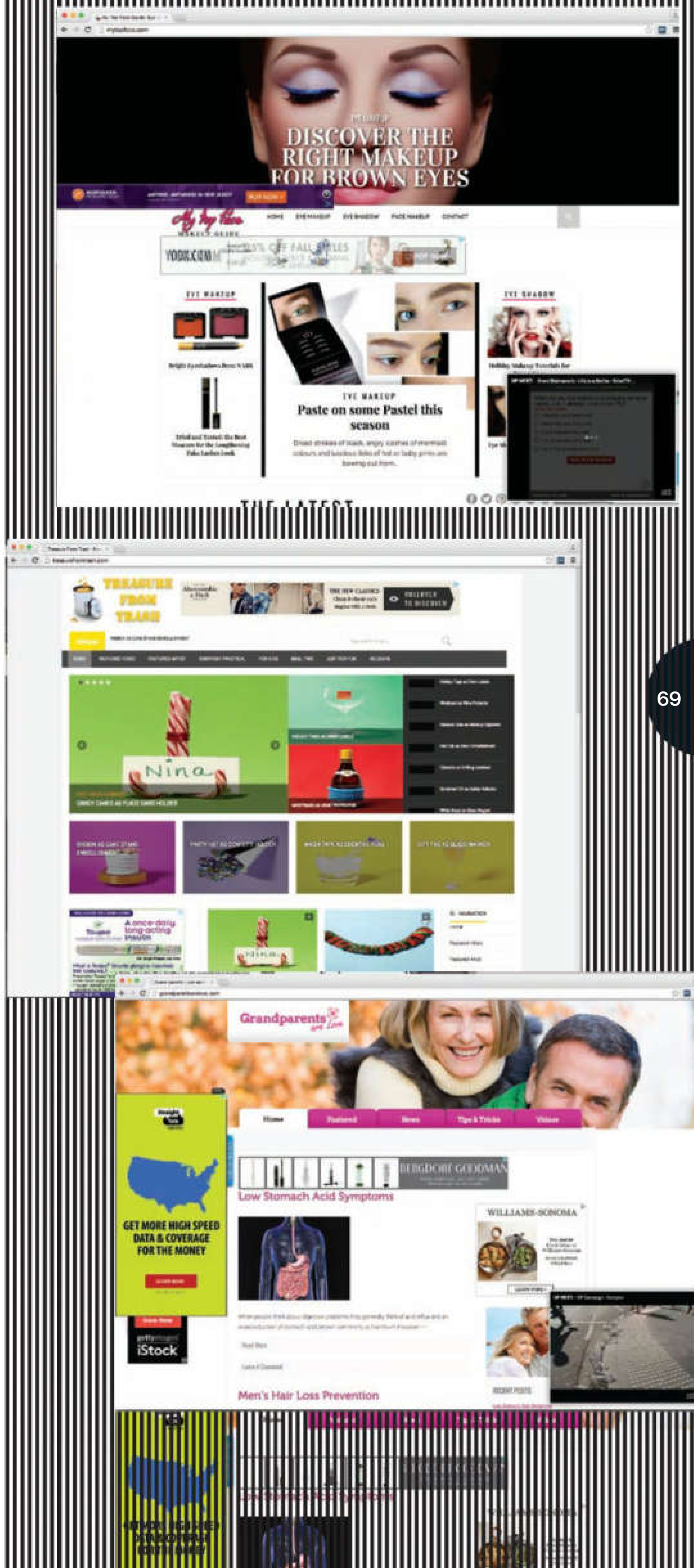
Yomtobian allows that tab-unders are "low-quality traffic" and that Bonnier complained about that. But he says his firm checks the traffic of its supplying partners for bots and sends only real humans to the Bonnier websites. "We would never deliver traffic that we don't think is real," he says. Yomtobian also disputes Edelman's claims that Advertise.com's traffic is worthless. After all, people sometimes do see tab-unders and click on them. "There is a huge distinction," he says, "between worthless traffic and low-quality traffic."

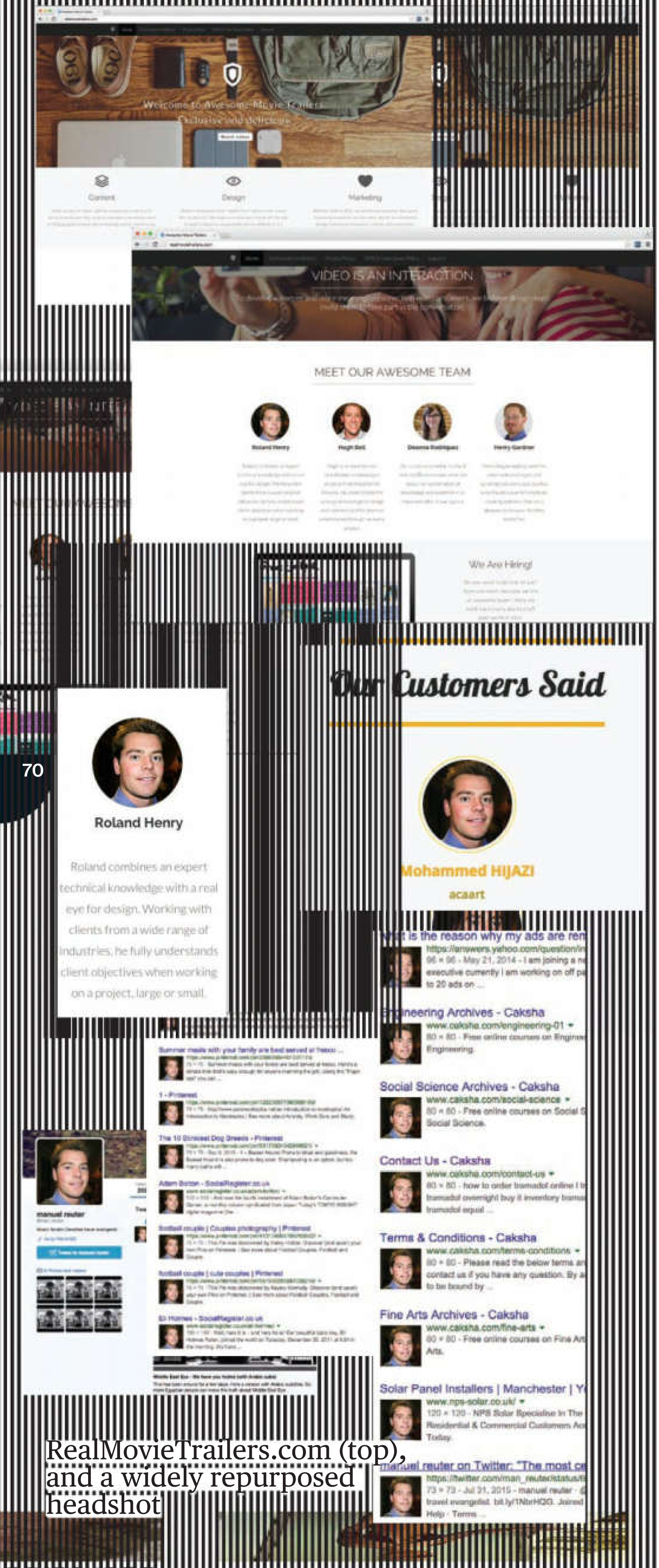
You've probably never visited MyTopFace.com. It's a cosmetics advice site that sells ad slots for anywhere from 73¢ to $10 per 1,000 views, with video ads fetching far more money than display ads, according to SiteScout. As of early September, the top story on MyTopFace, an article with an accompanying video called "Smokey Eye Makeup–Kim Kardashian Look," was at least 5 months old. Stale content seems like the worst way to attract readers, but if the readers are bots, it doesn't matter. So MyTopFace could have made as much as $9 per visitor, assuming it kept costs close to zero and was able to acquire traffic at a rate of $1 per 1,000. MyTopFace ran ads from companies and brands such as American Express and Hebrew National hot dogs.

After more than a dozen e-mails and phone calls, the operator of MyTopFace agreed to meet with *Bloomberg Businessweek*. He's 28, lives in Brooklyn, and introduces himself as Boris Boris (although a number of his network's sites are registered under other names). On a warm September afternoon, he shows up at a trendy Flatbush Avenue cafe with his wife and their 1-month-old son in tow. He's wearing a pair of brown, tortoiseshell glasses and sports a goatee with a waxed, handlebar mustache.

Boris says he was born in eastern Ukraine and made it to the U.S. when a Russian-owned business in New York heard about his Internet marketing skills through the émigré grapevine and got him a temporary visa. After a few months of fine-tuning, he helped a Brooklyn meat processor's website vault to the top of Google searches. "They were happy, and I knew I could stay," Boris

From top: MyTopFace.com, TreasureFromTrash.com, GrandparentsAreLove.com





RealMovieTrailers.com (top), and a widely repurposed headshot



says. "And I knew that I could find success in the USA, too."

But Boris saw that the real opportunities in Web advertising lay elsewhere. In less than five years, he's built a mini-publishing empire, Boris Media Group, largely through the acquisition of cheap—and, often, fake—traffic. Along with MyTopFace, his portfolio includes several low-maintenance properties, such as MaryBoo.com, which offers health and beauty tips to pregnant women. Boris's LinkedIn profile says his sites combine to reach more than 10 million viewers daily, which would get him in four days what the *Los Angeles Times* gets in a month.

Boris's traffic number is difficult to verify—he declined to provide a full list of his websites. But for much of the summer, MyTopFace offered from 30,000 to 100,000 ad impressions for sale each day, according to SiteScout.

During the interview, he freely admits he buys many of the visitors to his websites. He spends about $50,000 per year buying high-quality traffic for MyTopFace from Facebook (nothing nefarious there—you create an account for your business and then pay Facebook to advertise in people's news feeds). And then he spends another $50,000 or so on cheap traffic whose origins he isn't as sure about. Facebook traffic is real people, and costs about 100 times more per visitor than the mysterious cheap traffic.

*Bloomberg Businesswee*k asked two traffic-fraud-detection firms to assess recent traffic to MyTopFace; they agreed on the condition that their names not be used. One found that 94 percent of 30,000 visitors were bots; the other put the bot traffic at 74 percent. Boris didn't dispute the findings or appear at all concerned. "If I can buy some traffic and it gets accepted, why not?" he says. And if advertisers don't like it, he adds, "they should go buy somewhere else. They want to pay only a little and get a lot of traffic and results. If they want all human traffic, they should go direct to the publisher and pay more."

In a later e-mail, he explains his business differently. "Our network doesn't buy traffic, we buy advertising that brings us traffic," Boris writes. His operation uses antibot filters, he adds, and any advertiser that does find bot traffic can refuse to pay for it. In any case, fraud would be impossible, he says.

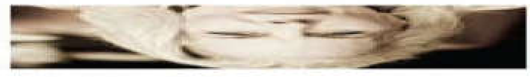
One prominent source of Boris's advertising revenue is Myspace. The once-dominant social network's new owner, the ad-tech firm Viant, relaunched it in 2013 with a focus on video. It has invested in Myspace exclusives, as well as custom-made video players that other sites can embed, much like YouTube's.

When visitors went to MyTopFace.com last summer, a Myspace player would pop up in the bottom right-hand corner of the screen. First, an ad would show, followed by the editorial content—a 15-second video of a guy driving a car at night.

The guy-driving-at-night video, called *Hitboy*, was one of several put together by a Myspace employee to serve as placeholders, according to Viant. They appear whenever Myspace blocks a site from showing its actual video content. That might happen, say, if the site violates Myspace's terms or conditions or if Myspace loses the rights to show a video that had been featured.

But the placeholders are still preceded by ads. Kozy Shack pudding, Chevrolet, Unilever, and various Procter & Gamble brands such as Tampax and Always have all paid for the privilege. Boris says the checks he cashed came through an affiliate program where Viant splits ad revenue with publishers who showed its players.

Viant's executives say they have an affiliate program,



but they've never heard of Boris or MyTopFace.com. They declined to name a single company that participates in the program. Boris says he put the Myspace players on his sites after being contacted by a middleman, whom he won't name. "My balls will be cut off," he says.

Chris Vanderhook, Viant's chief operating officer, says the company has technology that checks for nonhuman traffic. "If a website has 80 or 90 percent bot traffic, then yes, we will try to remove this site from any ad rotation," he says. Yet Boris's MyTopFace, which, again, according to the estimates provided to *Bloomberg Businessweek*, had between 74 percent and 94 percent nonhuman traffic, hasn't been cut off. Vanderhook says that must mean Viant's software sees some value to it. If a website has a Myspace player showing ads, he says, "we deemed that it was still quality enough to auction off."

Myspace's placeholder videos appeared on about 100 websites in August, according to Telemetry, a fraud-detection firm. If anything, some of the sites are even more creative than MyTopFace. Take RealMovieTrailers.com. The site lists a nonexistent address in New York as its headquarters. The phone number doesn't work. Image searches of its designers' headshots reveal they're stock photos, reused hundreds of times around the Internet. The photo of one designer, Roland Henry, also shows up on a Moroccan travel site as an ecstatic customer named Mohammed Hijazi. Another, Henry Gardner, is on an erectile-dysfunction-treatment page, where he's an unnamed customer declaring it's "the absolute best." The identity of RealMovieTrailers' actual operators isn't clear; the site's address is registered anonymously, and no one responded to an e-mail sent to an address listed on the site.

If advertisers "want all human traffic, they should go direct to the publisher and pay more"

In September, after *Bloomberg Businessweek* asked Viant about its content, Myspace players began showing non-placeholder videos. But if the counters embedded in the players are accurate, those placeholders are some of the most watched clips in Internet history. *Hitboy* has amassed 690 million views. Even bigger is *Surfing*, which looks like someone butt-dialed a video: five seconds of black screen with some muffled background noise. According to the Myspace counter, *Surfing* has been viewed 1.5 billion times. That would make it bigger than any YouTube video in history—with the exception of *Gangnam Style*.

Programmatic advertising has become such a tangle of data firms, marketing firms, strategy firms, and ad tech companies that it can be hard even for the biggest brands to keep track of it all. Three years ago executives at Kellogg started to notice that spots for Cheez-It, Pop-Tarts, and Special K were running on sketchy websites, hidden in pop-under windows, or compressed into screens as tiny as a single pixel. Others were displayed on sites where much of the "audience" was bots. "It turns out I'm buying from this guy down the street who opens up his coat and says, 'Hey, you want to buy some ads?' " says Jim Kiszka, the food company's senior manager for digital strategy.

The situation became more infuriating when Kellogg tried to get a simple breakdown: How much was each part of the labyrinthine digital-ad process costing? Answers were impossible to come by. Kellogg asked for itemized bills from the various ad agencies and data companies it hired, but they all refused. "It wasn't a smoking gun," Kiszka says. "It was more like a detective story where you had to piece together the evidence. And it was clear that in a system with that little transparency, there was bound to be problems."

In response, Kellogg's in-house ad department assumed control of its contracts with publishers and ad platforms such as Google and Yahoo, removing the agencies from the process. Kellogg started using software that alerted it when ads ran on suspect sites and refused to do business with any sites that wouldn't allow third-party validators to screen for bad traffic. Kiszka says the company has seen a 50 percent to 75 percent drop in bot traffic and a significant jump in its return on investment in advertising for Raisin Bran and Corn Flakes.

Ad fraud may eventually turn into a manageable nuisance like shoplifting, something that companies learn to control without ever eradicating. Advertisers generally see lower levels of fraudulent traffic by dealing directly with publishers rather than using programmatic exchanges. Of course, that also means missing out on the scale that automation provides. Sites such as Facebook, with its billion-plus users, are relatively bot-free, if expensive, places to run an ad. Earlier this year, Facebook said advertisers would have to pay only when their ads are actually seen by humans.

There's also the possibility that the multitudes of smaller ad tech players will get serious about sanitizing their traffic. Walter Knapp, CEO of Sovrn Holdings, a programmatic exchange, says he was as alarmed as anyone at the rise of ad fraud. He decided it was a matter of survival. "There are 2,000 ad tech companies, and there is maybe room for 20," he says. "I looked around and said, 'This is bulls---.' "

About 18 months ago, he set to figuring out how much of his inventory—ad spaces for sale—was fake. The answer mortified him: "Two-thirds was either fraud or suspicious," he says. He decided to remove all of it. "That's $30 million in revenue, which is not insignificant." Sovrn's business eventually returned to, and then surpassed, where it was with the bad inventory. Knapp says his company had a scary few months, though, and he keeps part of a molar on his desk as a memento. "I was clenching it so hard, I cracked it in half," he says.

He dismisses the idea that it's hard to tell genuine traffic from fake. "The whole thing about throwing your hands in the air and saying, 'I don't know, maybe it's real, maybe it's not real,' " he says. "You can absolutely find out." He sees it the way Supreme Court Justice Potter Stewart saw smut. "How can you tell it's porn? You know it when you see it," Knapp says. "Like, go to the website, man." Ⓑ

# The Most Intelligent Building in the World Requests Your Presence in Room 3


The fourth-floor atrium balcony at the Edge serves as workspace, cafe, meeting room, and bar for employees at consulting firm Deloitte's Amsterdam headquarters. It's a buffer of serenity from the bustling highway, railway, and shipyards that make up the view.

# Inside the Connected Future of Architecture

By Tom Randall
Photographs By Raimond Wouda

**It knows where you live. It knows what you drive. It knows who you're meeting with today and how much sugar you'll take in your coffee. At least it will after the next software update. This is the Edge, and it's quite possibly the smartest office space ever constructed.**

**A day at the Edge starts with a smartphone app developed with the building's main tenant, Deloitte. From the minute you wake up, you're connected. The app checks your schedule, recognizes your car when you arrive, and directs you to a parking spot.**

**Then it finds you a desk. Because at the Edge, you don't have a fixed desk. No one does. Workspaces are based on your schedule: sitting desk, standing desk, work booth, meeting room, balcony seat, or a "concentration room." Wherever you go, the app knows your preferences for light and temperature and tweaks the environment accordingly.**

**The building of the future necessitated invention. Its superefficient LED panels, made by Philips for the Edge, require such a trickle of electricity they can be powered using the same cables that carry data for the Internet. Next come 28,000 sensors to create a "digital ceiling" that wires the building like synapses on a brain.**

**The Edge isn't just smart, it's also the greenest building in the world, according to British rating agency BREEAM, which gave it the highest sustainability score ever awarded. The Dutch have a phrase for all of this: het nieuwe werken, roughly, the new way of working. It's about using information technology to shape both the way we work and the spaces where we do it. It's about resource efficiency in the traditional sense—the solar panels create more electricity than the building uses—but it's also about the best use of humans. "We think we can be the Uber of buildings," says Coen van Oostrom, chief executive officer of OVG Real Estate, the building's developer. "We connect them, we make them more efficient, and in the end we will actually need fewer buildings in the world."**

**SETTINGS**


**Smartedge App**

The smartphone is your passport to the Edge. Use it to find your colleagues, adjust the heating, or manage your gym routine. You can even order up a dinner recipe, and a bag of fresh ingredients to make it will await you when the workday is over.

**Exteriors**

The southern wall (above) is a checkerboard of solar panels and windows. Thick load-bearing concrete helps regulate heat, and deeply recessed windows reduce the need for shades despite direct exposure to the sun. The north-facing wall (top left) is almost entirely glass. The building's signature angled cutout floods the atrium and workspaces with daylight and provides a sound buffer from the adjacent highway and train tracks.

SOLAR

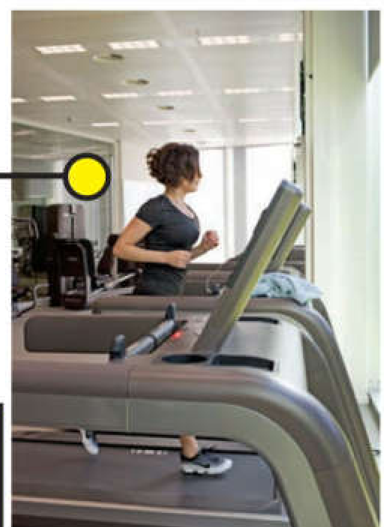
CHARGING STATIONS

### Car and Bike Parking

Garage entry is automated. A camera snaps a photo of your license plate, matches it with your employment record, and raises the gate. Even the garage uses sensor-equipped LED lights, which brighten as you approach and dim as you leave. Free chargers for electric vehicles aren't surprising—in Amsterdam, even the airport taxis are Teslas.

### Fitness

The on-site gym encourages employees to break for a midday workout. Flash your phone at the check-in station and the gym's app automatically tracks your progress. Some of the exercise stations here will actually harness the energy of your workout, sending hard-earned watts back to the grid—as if you didn't already feel like a hamster in a wheel.



HUMAN POWER

### New Way of Working

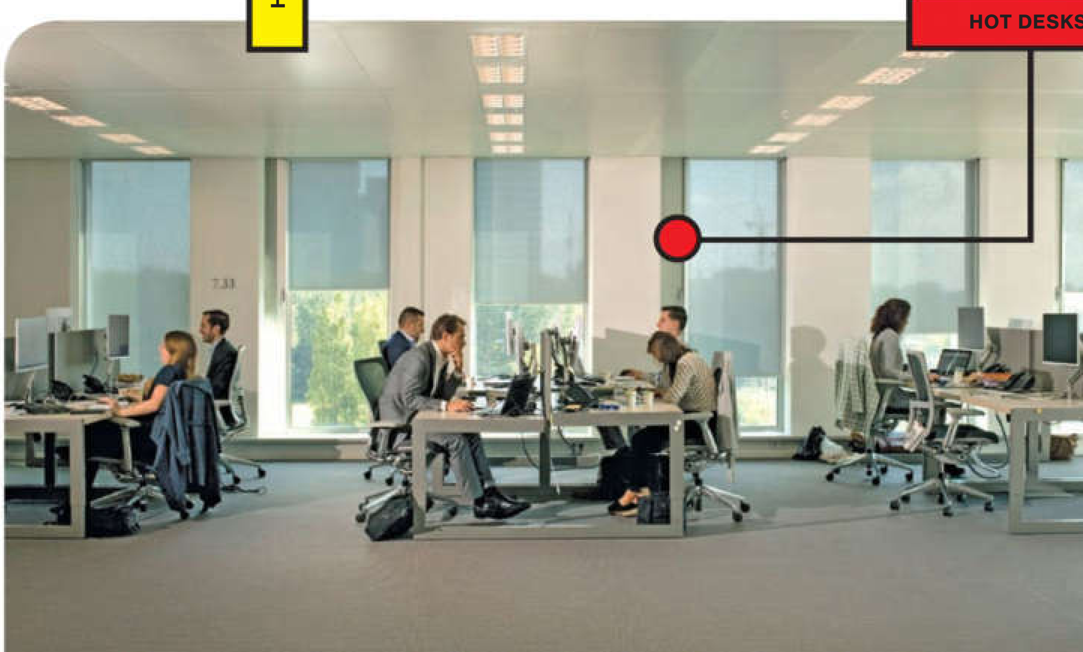
Because workers at the Edge don't have assigned desks, lockers serve as home base for the day. Find a locker with a green light, flash your badge, and it's yours. Employees are discouraged from keeping a single locker for days or weeks, because part of the *het nieuwe werken* philosophy is to break people away from their fixed locations and rigid ways of thinking.

SMART LOCKERS

### Workspaces

About 2,500 Deloitte workers share 1,000 desks. The concept is called hot desking, and it's supposed to encourage new relationships, chance interactions, and, just as important, efficient use of space. Some tiny rooms at the Edge contain a lounge chair and a lamp (no desk)—perfect for a phone call. There are also coffee lounges and game rooms. Massive flatscreens around every corner can be synced wirelessly with any phone or laptop.

HOT DESKS



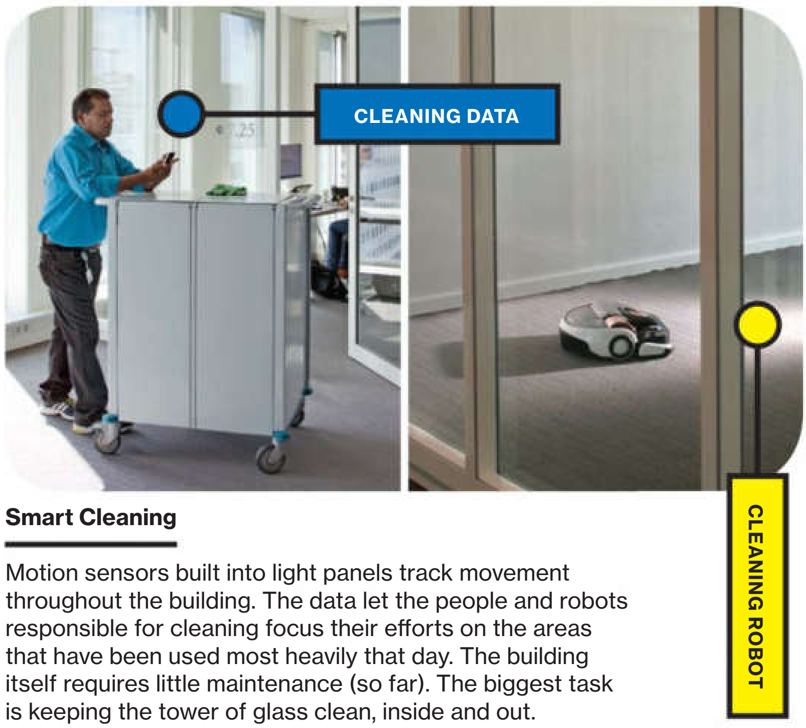
## Security

This little robot comes out at night to patrol the grounds. If an alarm goes off, the camera-equipped automaton can identify the culprit or let security know it was a false alarm. It cruises around automatically like a Roomba or can be commandeered by remote control. Erik Ubels, chief information officer for Deloitte in the Netherlands, says he noticed similar robots in shipyards, tracked down the manufacturer, and asked if they could be modified for office security.



## Bathrooms

The Edge watches you in the bathroom, too. This little box dispenses a spool of cloth for hand drying. Unlike a typical hand dryer, though, this one is connected to the Internet. It lets the cleaning staff know when a busy bathroom is probably ready for a cleanup. (Throughout the building, data on individuals aren't shared with bosses.)

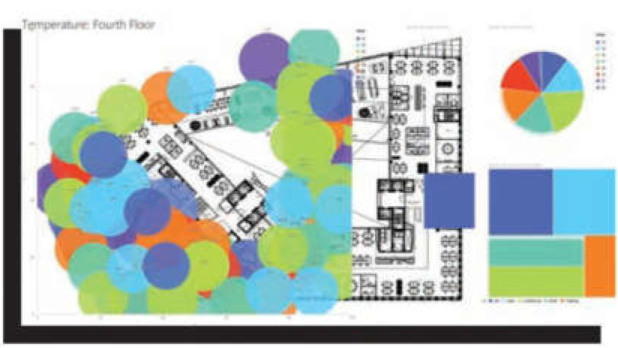



## Smart Cleaning

Motion sensors built into light panels track movement throughout the building. The data let the people and robots responsible for cleaning focus their efforts on the areas that have been used most heavily that day. The building itself requires little maintenance (so far). The biggest task is keeping the tower of glass clean, inside and out.


## Temperature

Sensors in the LED light panels show detailed temperature and humidity readings across a floor (below). A Deloitte survey found that while fewer than a quarter of employees actively use the app's thermostat features, three-quarters say they love it. Maybe that's because precision controls eliminate the problem of natural hot and cold spots. A coming upgrade will boost efficiency further by grouping desks by temperature preference.



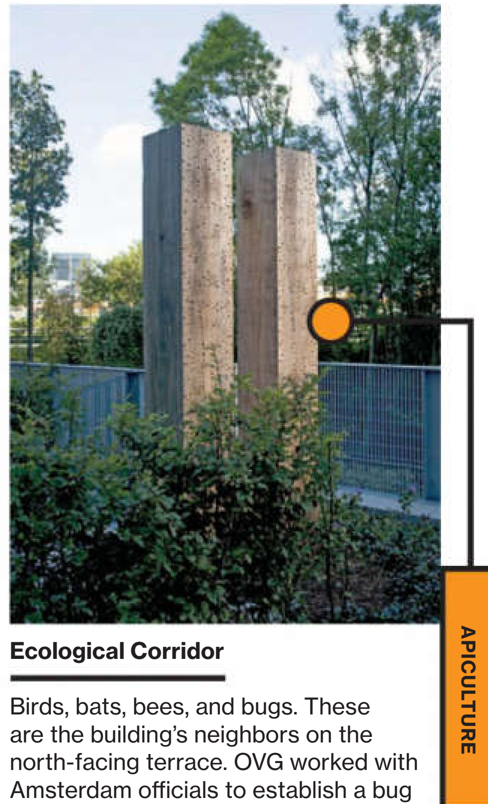


## Water Supply

A massive concrete tub in the back of the parking garage gathers the rainwater used to flush the building's toilets and water the gardens. It's a loud room on a rainy day. The water comes from collection systems on the roof and outdoor balcony.

## Atrium

This is the gravitational center of the Edge's solar system. Mesh panels between each floor let stale office air spill into the atrium, where it's vented through the roof. Slight heat variations and air currents make it feel like the outdoors. Even on a stormy day, it remains opalescent with natural light and angles of glass. The slanted roof ensures every workspace is near a window. "A quarter of this building is not allocated desk space, it's a place to meet," says Ron Bakker, architect of the Edge at London-based PLP Architecture.

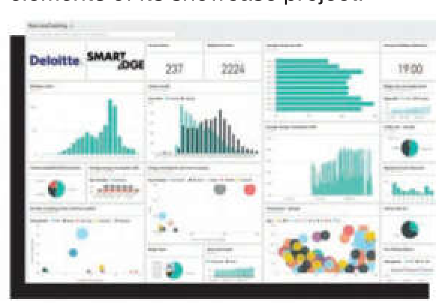



## Ecological Corridor

Birds, bats, bees, and bugs. These are the building's neighbors on the north-facing terrace. OVG worked with Amsterdam officials to establish a bug corridor through the city: a path of vegetation that supports beneficial insects. Birdhouses and bat boxes are tucked discreetly into the landscaping. These pockmarked towers support various species of solitary bees, which buzz about the flowers on the public terrace.

## Data Analytics

Deloitte is collecting reams of data on how the Edge and its employees interact. Central dashboards track everything from energy use to when the coffee machines need to be refilled. On days when fewer employees are expected, an entire section might be shut down for the day, cutting the costs of heating, cooling, lighting, and cleaning. Deloitte's general philosophy with the Edge was that anything with a return on investment of less than 10 years is worth a try. OVG said it was willing to spend more for some elements of its showcase project.



# Mi Casa Es Mi Casa

Ada Colau, Barcelona's new mayor, vows to fight inequality by sending tourists packing

By Stephan Faris

Photograph by Nacho Alegre

In 2007, Ada Colau put on a black leotard, a yellow cape, and a Zorro mask and gate-crashed a campaign rally in Barcelona. For two and a half minutes, Colau commandeered cameras, holding up a cardboard sign—"Housing Out of the Market, Like Education and Health"—while she delivered a speech on irresponsible development. "We don't want to hear that the solution is to build more," Colau told the crowd gathered in the small city square. "We have devastated our territory more than enough. There are a lot of houses. What we need is that these houses fulfill their social role." When she was done, she dashed between a pair of parked cars and sprinted down the street.

She didn't know it then, but her appearance as a superhero was one of the first steps on a path to city hall. In June she was elected mayor of Barcelona, with the support of a coalition of leftist political parties. She campaigned on fighting inequality.

The Spanish economy in 2007 was afloat on an enormous housing bubble, and real estate was rapidly becoming unaffordable. She had launched a prescient protest. "The government was making a show of success: 'The Spanish Miracle,' " says Colau, 41. She's wearing a long, casual cardigan sweater and sitting at a small conference table in a corner of her office. "But the people were already suffering, because the prices of houses were very high." Donning the mask and cape—and videotaping the stunt—was a way to call attention to an issue she felt none of the candidates for mayor were appropriately addressing. "In a media culture like ours, you have to find ways to be seen and heard," she says. "It worked well. The message was, 'You have to be a superhero to survive in this city.' "

Colau rose to local and then national prominence as an activist in the wake of the 2008 global financial crisis, emerging as one of the most vocal critics of the government's austerity policies. She led a movement that faced down banks over foreclosures and organized protests outside the homes of conservative lawmakers and was an active member of Spain's Indignados, the protest movement that inspired Occupy Wall Street.

Her election—as the head of her party, Barcelona en Comú, a hastily formed leftist coalition—puts her at the forefront of a leftward swing in Spanish politics, along with the recently elected mayor of Madrid, Manuela Carmena, and the leaders of the insurgent Podemos party. Since taking office, Colau has shown no sign of blunting her approach. "Barcelona is a clear example of a global city," she says. "Billions of euros circulate in this city every year. But they're distributed badly. The inequality here is enormous. It's out of control."

Colau's office is on the second floor of city hall, an art-packed 15th century Gothic palace with an 18th century neoclassical façade. She is the first woman to hold the city's highest office, and she's said she'd like to update the décor in the mayor's receiving room with portraits of important women from Barcelona's history. So far, however, the only change she's made is to affix a piece of printer paper to the door to

her office. It reads, “Let us never forget who we are and why we are here.”

Colau is at once businesslike and engaging, laying out her arguments as if they were cards on a table. When the subject is emotional—such as the photographs of a 3-year-old Syrian boy, Alan Kurdi, dead on a Turkish beach—you can hear it in her voice. When she wants to stress a point, she smiles or leans towards her interlocutor.

Colau sees parallels between housing and tourism; she worries the latter’s growth is hurting citizens and has declared a one-year ban on new hotel licenses. She has angered the Spanish government by removing a bust of former King Juan Carlos from city hall’s main chamber; announced her intention to rein in Airbnb; and taken aim at banks, threatening to fine those that keep their properties empty, rather than rent them out at subsidized rates.

“As mayor, I can talk to the banks on a more equal footing than I could when I was just a citizen,” she says. “There’s a wide consensus to say, ‘Guys, we need these houses, not to speculate but for the families that need them. First we will offer you the opportunity to collaborate and lend us these houses that you’re not using and that aren’t going onto the market. We’ll improve them and put them to use. And if you don’t want to collaborate, we’ll try other instruments to give you an incentive.’ ”

**In early September, Colau held a victory party, for herself** and seven other leftist Spanish mayors who had recently taken power, in a community center in a former train station. Colau was the last to take the podium, and she gave an impassioned speech on topics ranging from violence against women to the plight of refugees to subsidized meals for schoolchildren. The unifying theme once more was the fight against inequality. “The crisis we’re facing is not only economic or social,” Colau said. “It’s a primarily political and above all ethical crisis, one that has taken place under decades of governments that have been hostage to the 1 Percent.”

Two months earlier and 1,100 miles to the east, Greece had held a referendum on the terms of a bailout of its debt in which voters roundly rejected conditions imposed by creditors collectively known as the troika—the European Commission, the European Central Bank, and the International Monetary Fund. Shortly after, Athens was forced to accept even harsher terms to avoid being ejected from the euro zone. “We give our full support to Greece,” Colau told the applauding crowd at the community center. “It must not surrender. Let them know that in southern Europe, the democratic revolution is unstoppable, that they are not alone, that we are here to stand up to the troika and the criminal markets.”

Her election is part of a destabilization in European politics as traditional parties have wilted, providing opportunities for anti-establishment candidates. Colau also comes out of a long history of protest movements in Barcelona. It’s the capital of Catalonia, which is linguistically distinct from the Spanish-speaking regions of the country. As Spain’s second-largest city, Barcelona has always been a counterweight to the central government in Madrid. It was the epicenter of the country’s anarchist and labor movements in the early 20th century and a Republican stronghold during the Spanish Civil War.

The city has also been home to a growing Catalonian independence movement. The same discontent that opened city hall’s doors to Colau has brought hundreds of thousands of people into the street, demanding a chance to redefine their relationship with Spain. Madrid has consistently declared the independence movement in violation of the constitution. One of the campaign’s leaders, Artur Mas, who is president of Catalonia, has called regional elections for Sept. 27, pledging to start the secession process if parties in favor of independence get a majority of seats in the Catalan parliament.

Independence from Spain has never been an important issue for Colau; while she supports the right of Catalonians to decide, she hasn’t taken a strong stance on how they should vote. “Nationalism as a subject has never interested me,” she says. “But democracy, yes.”

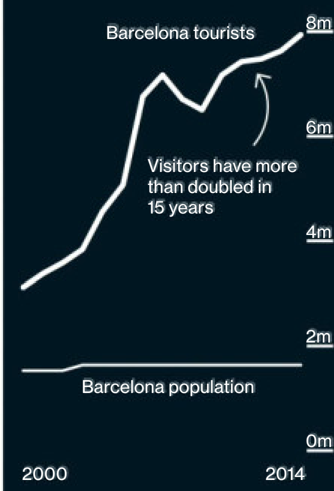
Despite the city’s protest roots, its politics have been remarkably stable since democracy was reintroduced to Spain in 1978. Until the global economic crisis, the left-wing Partit deis Socialistes de Catalunya (Socialists’ Party of Catalonia) won every election. Then, in 2011, voters elected a center-right government, only to reject it four years later in favor of Colau even though the economy had started to grow again. “When you start recovering, there are people who are going to be able to grab the hook and rise,” says Antoni Vives, a councilman who served as deputy mayor in the previous government. “And there are people who aren’t. Those are the people who voted for Ada Colau. We were not able to explain to them that we care for them, and that the prosperity will eventually reach them.”

In a country with a surprising number of politicians who are clumsy communicators, Colau stands out as a skilled and emotive speaker. In addition to traditional street rallies, her campaign organized its supporters to push hashtags into trending topics. Among its most successful social media efforts was an autotuned YouTube video of Colau singing a lively campaign song, her charisma shining through as she breaks composure between takes. “It was a way of trying to connect with people who are difficult to connect with in the traditional way,” says Joan Subirats, a professor of political science at the Autonomous University of Barcelona who helped plan her campaign. It worked: Turnout in the 2015 elections was higher across the city than it had been four years earlier, and it rose much more in the poorer neighborhoods where support for Colau was strongest.

**Colau came of age as an activist during the anti-globalization** movement of the 2000s. Spain generally, and Barcelona in particular, has developed a tradition of theatrical activism, and Colau has spent most of her adult life in the thick of it. It was the housing battle, though, that made Colau a national figure. Under Spanish law, when a bank forecloses on a mortgage and

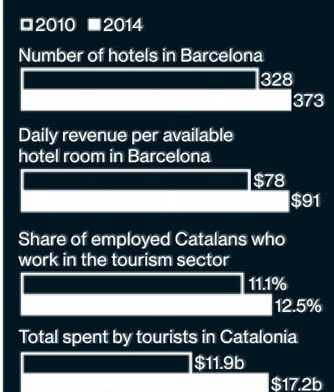
## Gaudí Can Wait

Colau’s reforms could disrupt a vital part of the national economy




Tourism’s share of GDP

| 9% | 10% | 15% |
|---|---|---|
| France | Italy | Spain |



seizes a house or apartment, only part of the debt is wiped out. The rest remains on the books, and the owner isn't able to declare bankruptcy to escape the debt. The bank has claim to all assets, not just the house.

"The president of the government had explicitly told the population, 'You have to buy a house because it's the most secure investment, the best thing for your country,' " says Colau. "Millions of people who weren't trying to speculate, or to be rich, but who thought they were doing the most responsible thing, the safest thing, discovered that they had done the worst thing in their lives, and that there was no way to escape."

In 2009, Colau and a handful of other activists formed a grassroots organization called the Platform for People Affected by Mortgages—known by its Spanish acronym PAH. "She's a natural leader," says Lucía Martín, one of the group's founders. "It's not that she says, 'OK, I'm going to be the leader.' It's that everybody looks around and says, 'Yes. Her. She looks like she can do it.' It became really obvious."

One of the first people PAH assisted was Matías González Barquero, who had taken out a mortgage on his home to soundproof his bar at the request of the municipality. González was forced to close the bar in 2009 after a partner died and another fell sick. As a small-business owner, he was ineligible for unemployment, and soon he couldn't pay his mortgage.

When he attended his first PAH meeting in 2010, his apartment had already been put up for auction, but it had failed to sell, and he hadn't moved out. When González was scheduled to be evicted by police in March 2010, the group obtained a period of leniency from a judge. Over the next year and a half, PAH blocked two other eviction attempts, mobilizing some 300 people to block the entrance to his apartment. Colau was with González in his house, coordinating the protest from behind locked doors. "She said, 'You keep calm, we're going to make it,' " recalls González. "When she was facing the banks, she was very tough. But with me, she was a very close person."

Colau (left) and a fellow protester in 2007

In September 2012 the bank tried to evict González again. This time, he and Colau took the case to the company's Barcelona headquarters. Colau brought her newborn with her. González dressed for the occasion in prison stripes. As a result of the showdown, the bank agreed to forgive the outstanding debt, and even paid for a van to move his belongings into a public apartment provided by the city.

The PAH campaign changed the dynamic between banks and their debtors. The group had stratospheric public support. PAH now can often stop an eviction with a phone call or a handful of demonstrators. "It used to be the case that I would go trembling to the bank," says González. "Now it's the banks that are trembling when we go there."

It would be a stretch to say that the banks are trembling at Colau's election. But they're paying attention. As mayor, she has met with the heads of many of the banks she once protested against, reiterating her intention to enlist their support in expanding the stock of public housing. The tactic of fining banks with empty homes on their books is vulnerable to legal challenges, but the town of Terrassa, about a 40-minute drive from Barcelona, has already tried it, handing out its first fines last year and fending off a lawsuit.

"The main objective of the banks is to sell as soon as possible those empty houses. Unfortunately they can do nothing, given the weak housing market situation," Encarna Pérez, a spokesperson for the Spanish Banking Association, said in an e-mail. Penalizing banks for holding properties they'd rather be rid of is "incomprehensible," she added.

Much of the business community has adopted a wait-and-see stance, especially regarding Colau's views on tourism. "We have to be less dogmatic and more open to reality," says Jordi William Carnes, director of the tourism board. "It's not a question only of big business owners. The taxi driver, the hairdresser, the storekeeper, all these are getting advantages from tourism."

Colau's concern about tourism is, unsurprisingly, informed by her experience with housing. A tourism boom has transformed large parts of the city, especially the rambling medieval streets of the historic center, the neighborhood around the fairy-tale spires of Catalan architect Antoni Gaudí's Sagrada Família Basilica, and some of the areas around the waterfront. La Boqueria market in the city center, for instance, where locals once did their shopping, has become a giant food court, with tour groups crowding around stands that previously sold fresh fish but now serve meals.

The overall effect—familiar to residents of such cities as Venice, New Orleans, or Rome—is similar to gentrification, as the influx of money and soaring property values drives out local residents. Barcelona has some 10,000 registered tourist apartments and perhaps as many as 20,000 unauthorized rentals—most of them marketed through sites such as Airbnb—and as property owners have found it more profitable to serve the tourist market, rents have risen.

Colau has wasted no time signaling a change in the way the city approaches tourism. In addition to putting new hotel licenses on hold, she has questioned the appropriateness of using city money to subsidize Formula One racing and declared that the city wouldn't bid for the 2026 Winter Olympics.

When Barcelona hosted the Olympics in 1992, it had so few hotels that organizers chartered 11 cruise ships to accommodate visitors. In 2013, Barcelona was the fourth-most-visited city in Europe, according to PwC, with hotel room demand outpacing supply despite hotels opening at an average rate of about 10 per year. That's made the city's hotels among the most expensive on the Continent. In the past four years, tourism has grown by 18 percent; the industry accounts for 12 percent of the city's gross domestic product. For Colau, the effect is worryingly reminiscent of the housing bubble—a socially disruptive surge in investment that enriches a few at the expense of many. "There's strong growth, and this should serve as a warning, because it can generate imbalances," she says. "We don't want to repeat the errors of the real estate boom."

The general consensus in Barcelona is that Colau, like insurgent politicians across Europe, has entered unfamiliar territory. Her ability to make sure she is seen and heard is unquestioned, but her success will depend on her skills as a manager and her ability to turn her proposals into policies. "Many cities would like to have the problems that Barcelona has," says Mateu Hernández Maluquer, chief executive of Barcelona Global, a business lobby. "Her diagnosis is OK. There's a need to better manage tourism. It's the prescription we're still waiting for." B

GRAPHIC BY BLOOMBERG BUSINESSWEEK. DATA: EUROSTAT, TURISME DE BARCELONA, STATISTICAL INSTITUTE OF CATALONIA, WORLD TRAVEL AND TOURISM COUNCIL

MARC JAVIERRE

# Business Travel Is Booming

As travel spending reaches sky-high levels, all sectors are catering to corporate customers

Since the end of the Great Recession, the number of workers traveling on the company dime has climbed to dizzying altitudes. According to research from the Global Business Travel Association (GBTA), which details business travel spending in 75 countries across 15 industries, U.S. business travel has steadily grown since the economy bottomed out, climbing 38 percent since 2009. By the end of 2015, this domestic spending is projected to increase by 4.9 percent to $302.7 billion, and with a continuing surge in economic confidence anticipated for next year, the only question that remains is how high the numbers will go.

With business travel soaring, the needs of the frequent flier are of particular interest to major industry players as they compete for a larger slice of the pie. “Time is money for business travelers, so it comes as no surprise that U.S. travelers place a premium on convenience,” says Joseph Bates, Vice President, GBTA Foundation. “While a more convenient flight or a hotel closer to the meeting may cost slightly more, it is worth it to business travelers and their companies if it allows them to be more productive and maximize their time.”

To meet the needs of the savvy business traveler now and in the future, airlines and allied industries will need to offer flexibility and customized service, and remain committed to staying on the cutting edge of technology.

[redacted]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## A new travel experience takes flight

To truly appeal to and please its business customers, an airline must listen to them. Lufthansa did so, and it didn't just result in mere cosmetic changes—it has led to an entirely new travel class. "There were people saying that they wanted an upgraded experience from Economy Class, but that Business Class is too costly," said Annette Mann, Lufthansa's Director of Premium Economy Launch Management, of what inspired the airline to take action. Recognizing that this category of traveler has grown substantially over the last few years—and that their fleet had the space to introduce a differentiated product line—Lufthansa went to the drawing board to create an entirely new class, and the result is Lufthansa Premium Economy Class.

From its conception, Premium Economy was intended to address what Lufthansa acknowledged as a product gap in its offerings. "It's a little bit like if BMW offered only the L Series and the 7 Series, with nothing in between," Mann explained. Much like a luxury automobile, the comfort upgrade of the Premium Economy experience begins with the seat itself.

A main feature of Premium Economy—as well as Lufthansa travelers' most requested improvement—is an improved seat. The notion of more comfortable cushions and deeper reclining backs would excite any frequent transatlantic corporate flier, but the differentiator that will always top the list is more space.

"It's a totally different seat than Economy Class," Mann said. "You get 50 percent more space with Premium Economy, and it's not just legroom—it's also the space to the sides." The result is the end of the much-maligned middle seat, as each of the two seats per aisle boasts its own foldout table—perfect for working on a laptop while mid-flight—and adjustable backrest and footrest, offering a superior level of comfort for long-haul flights.

It's also an entirely new experience, and so the Premium Economy experience begins well before takeoff. After checking two bags for free (double the allowance of Economy Class) and decompressing with some downtime in the Lufthansa Business Lounge (€25 lounge access fee), a traveler is welcomed on board with a complimentary drink. Once in the air, each business traveler can enjoy a personal amenity kit, Lufthansa's extensive in-flight entertainment program (presented on monitors up to 12 inches in size), dedicated power outlets and meal service served on specially designed china tableware.

> "Time is money for business travelers, so it's no surprise that they place a premium on convenience."

[redacted]

Departing Frankfurt, Germany to destinations ranging from Bangalore and Beijing to Los Angeles and Washington, D.C., Premium Economy Class will be installed throughout Lufthansa's entire long-haul fleet by the end of 2015. The first wave of travelers has been extremely satisfied, with many referencing the expense report-friendly price point as a reason. "The initial users have said, 'Yes, it's more expensive, but it's totally worth it,'" added Mann.

Those judicious businesspeople who have already booked a standard Economy Class ticket are welcome to request an upgrade to Premium Economy, where they can enjoy an upgraded flight experience.

With Premium Economy scheduled to come to all long-haul Lufthansa flights before year's end, it likely won't be long before all frequent fliers have enjoyed Lufthansa's class of air travel. — *David Burke*

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# ETC

# Home Office

West Elm attempts to sell American companies souped-up versions of its twee apartment furnishings

By Rebecca Greenfield

Jeff Hannoosh is getting ready to move offices. For five years he's worked at West Elm, the midrange-end-but-not-quite-Ikea furnisher that's come to define today's urban apartment aesthetic. Sales of all that blond wood, Middle Eastern fabric, and affordable marble led to revenue of $670 million for the company in 2014, up from half that in 2012. So 13 years after West Elm opened its first office, it's upgrading to a 150,000-square-foot space built in a revamped Brooklyn warehouse.

For a furniture company, the stakes for decorating your workplace are understandably high. Hannoosh was recently promoted to vice president for design, furniture, and lighting, and his current space is brimming with West Elm prototypes that were never put into production by parent company Williams-Sonoma. There's a lacquer bar console packed with books, an unsteady five-headed floor lamp, and a bronze-and-brass wire table that he uses for meetings. But none of it really works as office furniture. When West Elm decided to move, the company spent time looking at industrial furniture catalogs but couldn't find anything they liked. Eventually, "it made sense to us that we wanted to furnish it with our own furniture," Hannoosh says.

Early this summer the company introduced a line of office furniture, called Workspace, at NeoCon, the industry's annual trade show. Created with the commercial interiors firm Inscape, the label has 86 items, with plans to add more next June. Many of the pieces are durable versions of West Elm's homey favorites. The modern upholstered saddle chair, for instance, is a curvy seat with soft edges, upgraded with a heftier frame to meet the durability and safety standards of the Business and Institutional Furniture Manufacturers Association (BIFMA), which certifies furniture as safe for office use. "For years, our sales department and retail stores have told us people want to furnish whole offices with West Elm product," Hannoosh says. "But they need products that suit the needs of the modern office."

The Workspace pieces are organized into six collections, each one a nod to West Elm's signature aesthetics. The midcentury collection is Danish-inspired, offering boxy credenzas with stubby legs and thin, bronze-finished handles. Another range, called industrial, is like the boring desk and bookcases you already use but updated with light-hued oak surfaces held up by raw steel frames.

At $1,824 for a basic four-person desk and $568 for an armless desk chair, the West Elm pieces are about 20 percent cheaper than those from stalwarts such as Herman Miller and Knoll, which have dominated office design since the late 1960s, when workers started moving into cubicles. In the past 15 years, sales of office furniture have declined by about a quarter as office footprints shrink, startup budgets become more frugal, and tech advancements require less desk space—who needs filing cabinets in a paperless office? In turn, the average workstation costs about half as much as in the '90s, according to BIFMA.

The industry's midlife crisis dovetails with overall labor statistics. "I hope my compadres over at West Elm talked about the dramatic shift between boomers and millennials," says Jim Stelter, chief executive officer of Inscape. This year, millennials surpassed

**Come in. Have a seat.**



## Conference tables are lower, so meetings feel like a group hang

Clockwise, from top left: West Elm's midcentury executive desk with shelves and upholstered saddle chair; a contemporary benching configuration; an office outfitted with the modern collection; the industrial executive desk with leather task chair. All the art's for sale, too.

PREVIOUS PAGE: COLOURBOX (1), ISTOCK (1); ALL IMAGES: COURTESY WEST ELM; OPPOSITE PAGE: ILLUSTRATIONS BY 731

Generation X as the largest demographic in the workforce, according to Pew Research Center. A recent study by the University of North Carolina at Chapel Hill estimates that those born from 1976 to 2001 will make up almost half the workforce by the end of the decade. "Those individuals are more comfortable working in a more relaxed atmosphere," Stelter says. "It's not as rigid as what others have been raised in."

Half of the Workspace line features benching configurations, the industry term for the slabs of table shared by employees in open-plan offices, while everything else is designed to give off a casual vibe. Conference tables are lower than traditional height, so meetings feel like a group hang. Partitions between desks come in soft, pleated felt. Desk chairs are available not in practical, bouncy mesh, but rather in more attractive leather.

West Elm isn't the only furnisher making handsome commercial products. "We're thinking of the office as an office home, rather than a home office," says Alana Stevens, vice president for marketing at Knoll, which is known for pieces by design giants such as Eero Saarinen and Marcel Breuer. Last year, to diversify its offering, Knoll paid $95 million for Chicago-based furniture maker Holly Hunt. Not long after, Herman Miller, manufacturer of the famous Aeron chair, acquired Design Within Reach for $154 million. "We're seeing people trying to move away from sterile, conventional cube farms," says Lori Gee, vice president for applied insight at Herman Miller. The contemporary office environment, she says, should allow people to "work in new ways" and "support new behaviors." Holly Hunt and DWR are now among the brightest spots on their respective owner's balance sheet as their growth outpaces the more traditional divisions.

But given West Elm's past, Hannoosh believes he can nail this look better. "We're uniquely positioned to approach the workspace market," he says. "Lots of furniture companies want to do this, but it's not in their DNA." Still, West Elm would have had a hard time going it alone: Inscape provided connections with domestic manufacturing partners, the engineering bandwidth to create furniture that meets testing standards, and the distribution partners to help sell it. Furnishing offices often involves dealers, who negotiate pricing and understand the complexities of outfitting a space for large groups of people, an area in which West Elm had no experience.

Hannoosh says companies from financial firms to tech startups such as PlaceIQ, a mobile-advertising company in Manhattan, have expressed interest. When Matthew Novick, chief financial officer of PlaceIQ, was looking to upgrade its two-year-old Ikea setup to something sturdier, most of what was out there didn't match the company's needs or sensibilities. Too many of the desks were plasticlike and white, which didn't seem to go with cement floors and exposed ductwork. Novick was looking for something "a little bit more industrial, a little bit more collaborative," he says, and went for the pale wood meeting tables and low-slung sofas from West Elm's industrial collection. Once installed, the furniture should double as a recruiting tool, Novick says. "[Engineers] don't get excited about big cubes with drop ceilings. People are in jeans, in shorts, in T-shirts. West Elm goes more with that," he says.

The industrial line that Novick chose has been Workspace's top seller. "The veneer is very honest to the material," Hannoosh says. "You see knots, and you see imperfections in the wood, which isn't so common in the workplace." One of the side tables is a tree stump. For some, that look might be too casual. "I do think it's a niche," says Scott Delano, the design director for IA Interior Architects, a global office-design firm. And despite all the guarantees of quality, the West Elm veneer still reminds people of West Elm, whose home furniture isn't known for being particularly sturdy. "They don't think a West Elm desk would stand up in their office," he adds.

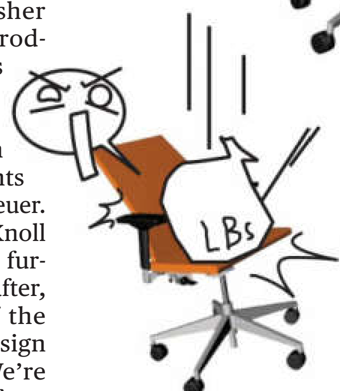
The challenge, then, is that these designs might look too much like they belong in an apartment. The furniture makers obviously don't see it that way. "The modern office is not just a place of work, it's a place where people should want to hang out," explains Knoll's Stevens. Why go out for happy hour drinks when there's a keg at work? Why go to the gym when there's an on-site boot camp? "How do you bring the comforts, the warmth, the openness of the home into the office?" she asks. "How do you de-corporate the office?" Or, perhaps there's a better question: How do you keep employees from ever going home? B

## Performance Review

*Office furniture must be more durable, flexible, and longer-lasting than what's in your home. Here's how West Elm had its chairs tested by BIFMA, the leading certifier.*

A cable pulls on the back, as if someone were leaning away from the desk, while the chair's restrained from tipping over for "many thousands of cycles," says BIFMA technical director Dave Panning. It shouldn't snap.

A machine applies force to the armrests as many as 100,000 times to imitate someone pushing against or sitting on them. (The latter use isn't advised.)




A bag weighing hundreds of pounds is dropped onto the seat, mimicking years of someone "aggressively sitting down," he says.

A lighter weight is placed on the seat, then the chair is pushed back and forth across low-level obstacles that simulate doorways. This is repeated tens of thousands of times.

Finally, while weighted, the seat is repeatedly rotated to make sure it will never fly off the base.

BIFMA SELLS ITS TESTS, SO IT WOULDN'T PROVIDE EXACT FIGURES

# TECHNICAL SUPPORT

*The best performance-oriented pieces from brands that make office clothes designed to hold up outdoors*
*By Abe Streep*

**Ministry of Supply Aviator blazer and chinos**
Founded in 2012 by three MIT grads, this company makes dressy shirts, pants, and blazers that perform like workout gear. This slim-fitting suit, made of a polyester fabric, flexes a great deal. So putting it on feels as if you're getting into a Spider-Man costume—in a good way. Fortunately, it looks and wears like a normal suit. *Blazer, $348; pants, $148; ministryofsupply.com*

### Eddie Bauer Departure shirt

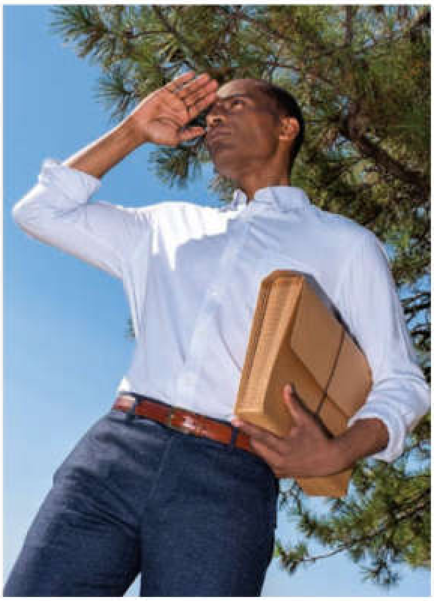
It's not formal enough for every office but still ideal as do-it-all travel wear. Stretchy and comfortable and, thanks to polyester-spandex fabric, you can throw it in your suitcase when you're in a hurry and it will come out wrinkle-free. *$70; eddiebauer.com*

### Outlier slim dungarees

These pants put their Brooklyn (N.Y.) makers on the map in 2010. The super comfortable, soft-shell, five-pocket jeans made of nylon, polyester, and elastane are perfect for bike commuting, meetings, and just about any weather short of a monsoon. *$198; outlier.cc*

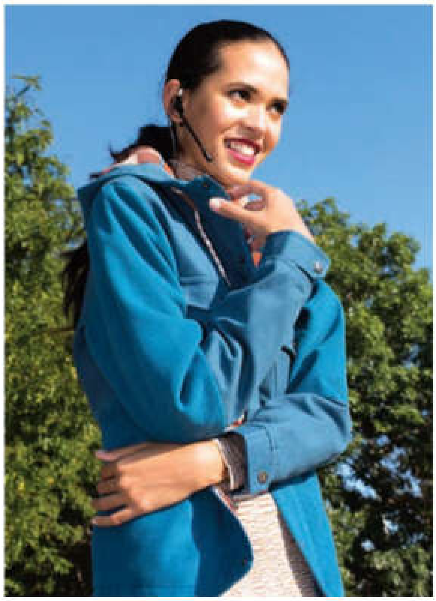
### Icebreaker Aria dress

Technical apparel makers have been slow to offer women's clothing. This New Zealand company makes a good effort with a 100 percent merino wool dress that's warm–with its long sleeves–yet resists odor. Plus, it's not too itchy. *$150; icebreaker.com*



### Ninox Aspen shirt

Merino wool is warm, soft, and BO-repellent. The downside is that it turns heavy when wet and loses shape. This Boulder (Colo.) clothier blends 54 percent cotton into its merino shirt to keep the tailoring intact. It feels like a flannel shirt but looks a lot sharper. *$149; ninox.cc*



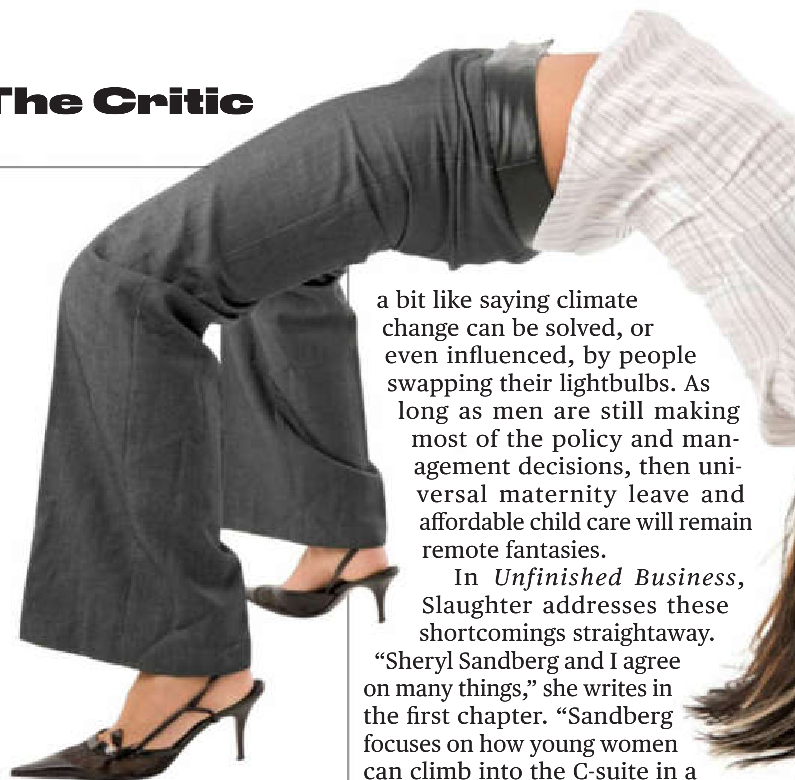
### Poler Pinyon jacket

The active wear company in Portland, Ore., bills itself as a more accessible Patagonia, targeting folks who like the outdoors but don't spend all day hanging off rock walls. The women's jacket has an appealing retro look and cozy wool interior but won't serve you well in heavy snow. *$166; polerstuff.com*

### Cole Haan & Mountain Hardwear ZerøGrand oxford shoes

Footwear giant Cole Haan and outdoor staple Mountain Hardwear are co-launching a new line for city dwellers. The longwing oxford is steel shank-free, with a rubber sole that flexes and responds like a sneaker. *$268; colehaan.com/zerogrand*

PHOTOGRAPHS BY SERGIY BARCHUK FOR BLOOMBERG BUSINESSWEEK; STYLIST: SHIBON KENNEDY; PROP STYLIST: DAVE BRYANT; HAIR AND MAKEUP: CYNTHIA ROSE



# LEAN BACK

*Anne-Marie Slaughter offers an alternative to Sheryl Sandberg's solutions for work-life balance*

*By Sheelah Kolhatkar*



The struggle many women who want to have children go through while trying to keep their careers on track fuels a robust industry of books, paid speeches, and symposiums. College-educated women, the frustrated consumers of these products, lurch from guru to guru, wondering why each new best-seller or TED Talk changes little. The most recent contributor is Anne-Marie Slaughter, whose book *Unfinished Business* may upend Sheryl Sandberg's *Lean In* as the reigning work-life balance manual.

By building on arguments Sandberg made before her, and diverging from them considerably, Slaughter, chief executive officer of the think tank New America and a former dean at Princeton, offers a realistic assessment of the persistent gender inequality that ails our late capitalist economy. After years of being told they can do anything they want while men still behave as if it's the 1950s, women are ready to hear the truth: Nothing is going to change for professional women in the realm of work, life, and family demands until men get on board.

To achieve this, Slaughter writes, the question of how to manage a career and a family, long cast as a "women's issue," should be reframed as a "caring issue." Everyone, male or female, parent or not, may at some point have caretaking obligations for another person. The assumption that there isn't likely to be a "wife" at home to deal with it, Slaughter says, should be built into the system. If it were, you would have fewer promising women (and men) dropping out of the workforce after having children. And then you might see more female Fortune 500 CEOs, surgeons, and law firm partners.

Sandberg, chief operating officer of Facebook and the closest thing the contemporary women's movement has to a patron saint, has been a force for good. Through her star power, she pushed an important issue onto the front pages. But she largely talks about women's own behavior. She emphasizes the importance of self-confidence and of choosing a partner who can balance the load. She suggests that women can move things along by being more ambitious and making dozens of small changes. It's a bit like saying climate change can be solved, or even influenced, by people swapping their lightbulbs. As long as men are still making most of the policy and management decisions, then universal maternity leave and affordable child care will remain remote fantasies.

In *Unfinished Business*, Slaughter addresses these shortcomings straightaway. "Sheryl Sandberg and I agree on many things," she writes in the first chapter. "Sandberg focuses on how young women can climb into the C-suite in a traditional male world of corporate hierarchies. I see that system itself as antiquated." She goes on, "When law firms and corporations hemorrhage talented women who reject lockstep career paths and question promotion systems that elevate quantity of hours worked over the quality of the work itself, the problem is not with the women."

After Princeton, Slaughter was hired by Hillary Clinton to be the first female director of policy planning at the U.S. Department of State. She famously quit that job when she realized her children needed her at home. This book grew out of a sensational story she wrote for the *Atlantic*, "Why Women Still Can't Have It All." Those who were "having it all," she argued, were either "superhuman, rich or self-employed." *Unfinished Business* is an attempt to dispel the myths she sees driving the "superwoman" trope.

*Unfinished Business: Women Men Work Family* ($28, Random House)

As for accomplishing those revolutionary shifts, she glosses over how difficult it's going to be. It will take a wholesale rethinking of American culture, policy, and the workplace. At times throughout the book, Slaughter's academia-inflected optimism can feel misplaced. But she does offer one piece of concrete advice: Vote more women into office. If her former boss becomes president, we'll have an opportunity to see for sure whether Slaughter's theory is correct. Ⓑ

ISTOCK (2); BOOK PHOTOGRAPH BY EVAN ORTIZ

# MIXED DRINKS FOR THE MASSES

*Humble canned cocktails for a happier happy hour*
*By Jillian Goodman*

"Mixology isn't taking itself as seriously as it once did," says Eben Freeman, the man behind the bar at Genuine Liquorette, New York's latest after-work drinks spot. Freeman has the authority to say such things, having helped kick off the cocktail craze in the mid-2000s at Tailor, a restaurant where he updated old standards using ingredients such as brown-butter-infused rum and smoked Coca-Cola. Today, as the beverage director for AvroKO—an architecture firm that's behind *boîtes* like Genuine Liquorette on both coasts—he isn't trying to walk back that legacy so much as mellow it out.

Key to that mission is the classic aluminum can. "As we know, cans are very cool now," Freeman says. Recently, they've shown up in place of glass at bars and liquor trade shows in the form of extra-carbonated gin and tonics or precanned Negronis. In Genuine Liquorette's subterranean space, they're mixing cocktails directly into them using special garnishes and mini liquor bottles.

It sounds easy, though still requires a special machine. The Cha-Chunker, as it's called, is a mechanical press that widens the openings of pop-top soda cans and prevents them from cutting lips. The bar serves several cocktails "cha-chunk style," including a Paloma, a mojito, and a "Jamo and ginger," mixing Jameson Irish Whiskey, ginger beer, lemon juice, and bitters ($10.10). It's also offering bartending classes, after which graduates can take the helm and build cha-chunk'd concoctions themselves. The liquor selection at Genuine Liquorette is impressively vast—including everything from haute bourbon to kitschy flavored vodkas from Pinnacle—which the big distributors appreciate. Freeman thinks customers will, too. "For me, it just comes from having a sense of humor," he says. Ⓑ


The mojito at Genuine Liquorette; feel free to try this at home

PHOTOGRAPH BY WILL ANDERSON FOR BLOOMBERG BUSINESSWEEK

## Pop off!

*Three more to try*

**Ballast Point**
The hot San Diego brewery also makes craft spirits, which it recently began mixing into canned gin and tonics as well as rum colas. *($14.99 for a four-pack; ballastpoint.com)*

**Mile High Spirits**
This Denver distiller calls its Punching Mule "America's first craft Moscow Mule in a can." They plan to go national next year. *($9.99 for a four-pack; drinkmilehighspirits.com)*

**Church Key**
This Los Angeles restaurant opened in late 2013 and cans cocktails including Negronis and bloody marys *($13-15; thechurchkeyla.com)*, serving them alongside seared foie gras and rib-eye for two.

# OH, JOY

ABC anoints old talent to save The View

By Jessica Coen

When *The View*'s 19th season premiered on ABC in early September, Joy Behar, an original cast member who sat on the panel for 16 years before leaving in 2013, was back as a permanent co-host. The live audience was ecstatic, cheering so much it made Behar blush. Her colleagues seemed pumped. But Behar's return to *The View* didn't feel particularly triumphant. It felt necessary: By the time last season ended, ad revenue for the once-thriving show had dropped almost 30 percent, to $64.1 million.

When *The View* debuted in 1997, its conceit was revolutionary. A panel of reasonably intelligent, outspoken women from diverse backgrounds—for network television, anyhow—would banter about the news. In a landscape of perky, chatty, celebrity-and-scandal-driven programming, it became a hit, drawing up to 3.9 million viewers a week in 2009, its most popular season.

Behar became its breakout star. A former schoolteacher who had quit her job to try her luck in show business, she was a no-nonsense comedic broad. She talked fast. She could be abrasive. But she was also the conversational lubricant. Her compulsive cut-to-the-chase style kept things moving.

When Behar left *The View*, she told *Deadline Hollywood* it was because she'd been "neglecting" her standup and wanted to pursue new projects. The next season, viewership fell to a little more than 3 million; the next year it dropped even further. Revenue declined for ABC, which tried to staunch the bleeding, installing a new executive producer (Bill Wolff, from MSNBC's *The Rachel Maddow Show*) and replacing almost all remaining panelists. It didn't work. On-air conversations were alternately bland or stymied by interpersonal tensions. For the first time, *The Talk*—a rival from CBS with an identical format—surpassed the show in ratings.

Barbara Walters, the show's creator and herself a panelist until 2014, was said to have been displeased with the decline of her broadcast brainchild. New producers were named, and Walters reportedly ordered Behar's return. But Behar wasn't champing at the bit to come back; she had been starring in her own one-woman show.

The timing with the election cycle convinced her, she says. "I'm not a major fan of pop culture," she admits. "How much can you say on Kim Kardashian, you know? With the political scene there's always something interesting to talk about."

On her first day back, Behar politely met her new co-hosts: Candace Cameron Bure, the new resident blond conservative; Raven-Symoné, the millennial who doesn't have a grasp on serious issues; Paula Faris, a *Good Morning America* alum; and comedians Whoopi Goldberg and Michelle Collins. They animatedly talked headlines. Then Senator Elizabeth Warren (D-Mass.) showed up, and Behar was so excited she held hands with her. Each subsequent day served up the requisite amount of gossip, but Behar also got the politics talk she came for. Day Two saw her criticizing Jeb Bush's failure to address Iraq. Donald Trump called in on Day Three. By the end of the week, Behar was back to running the show. "Everyone's kind of energized by [Joy's] love of politics," says Candi Carter, the new consulting producer.

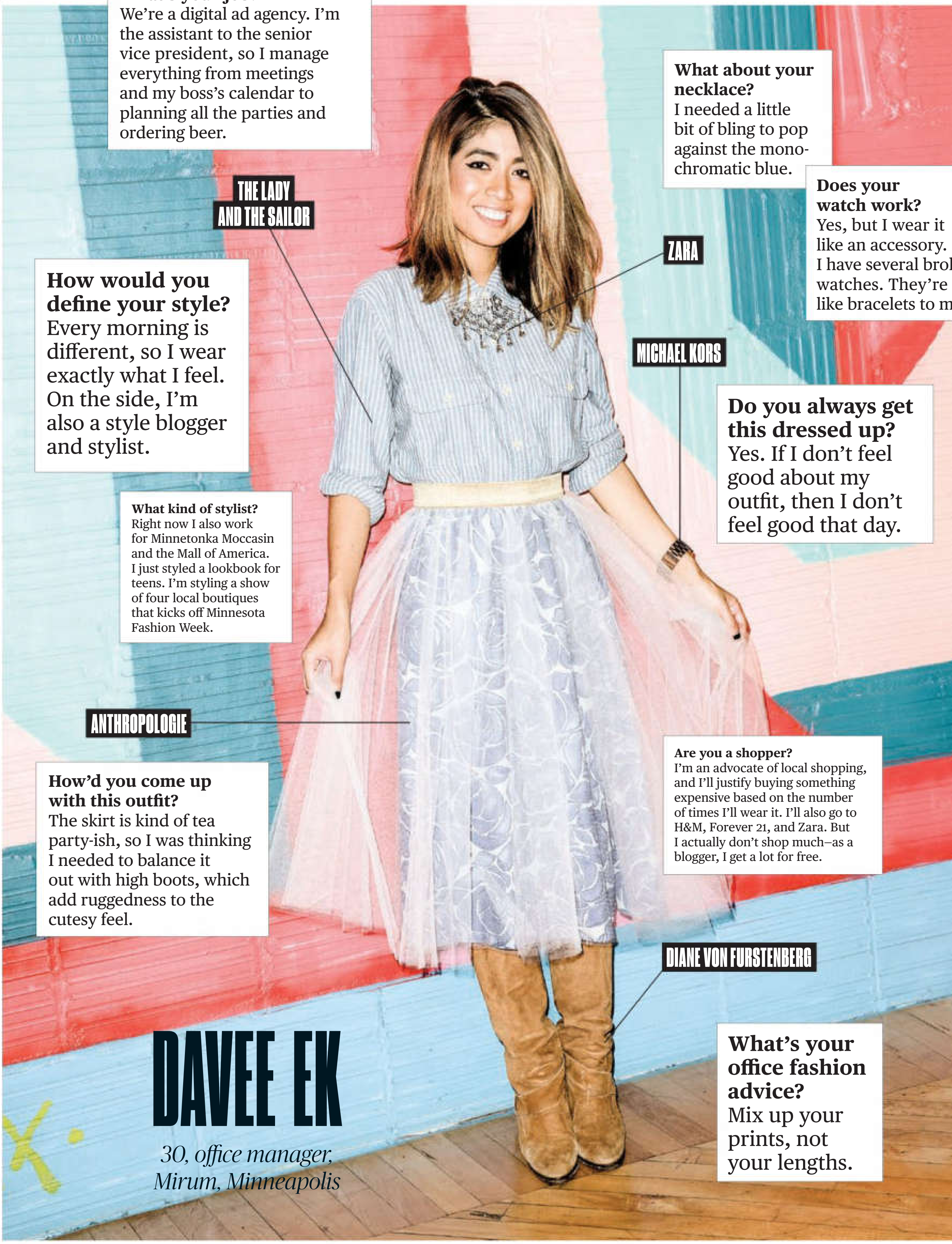
Still, Season 19's debut ratings were down 22 percent from last year's debut. "Audience demographics are changing," says Erik Brannon, an analyst for IHS, a television consultant. "Networks are relying on paid subscriptions to get their content out to an audience that's moving online." In other words, there's no reason to watch Behar and Faris debate Carly Fiorina's new ad when your Facebook feed is inundated with friends doing the exact same thing. Why watch a group of women gabbing on TV when you can have your own real-time conversation?

Behar, for her part, hasn't stopped courting drama. The week following the season premiere saw her apologizing repeatedly after mocking a Miss America contestant for being a nurse. Two sponsors pulled their ads, and a hashtag campaign vilified the show. "I just was not paying attention," she told her adoring audience. "I didn't know what the hell I was talking about." Ⓑ


PHOTO ILLUSTRATION BY 731; PHOTOS: GETTY IMAGES (3)

# DAVEE EK

*30, office manager, Mirum, Minneapolis*




PHOTOGRAPH BY CHRISTOPHER LEAMAN FOR BLOOMBERG BUSINESSWEEK

**What's your job?**
We're a digital ad agency. I'm the assistant to the senior vice president, so I manage everything from meetings and my boss's calendar to planning all the parties and ordering beer.

**How would you define your style?**
Every morning is different, so I wear exactly what I feel. On the side, I'm also a style blogger and stylist.

**What kind of stylist?**
Right now I also work for Minnetonka Moccasin and the Mall of America. I just styled a lookbook for teens. I'm styling a show of four local boutiques that kicks off Minnesota Fashion Week.

**How'd you come up with this outfit?**
The skirt is kind of tea party-ish, so I was thinking I needed to balance it out with high boots, which add ruggedness to the cutesy feel.

**What about your necklace?**
I needed a little bit of bling to pop against the monochromatic blue.

**Does your watch work?**
Yes, but I wear it like an accessory. I have several broken watches. They're like bracelets to me.

**Do you always get this dressed up?**
Yes. If I don't feel good about my outfit, then I don't feel good that day.

**Are you a shopper?**
I'm an advocate of local shopping, and I'll justify buying something expensive based on the number of times I'll wear it. I'll also go to H&M, Forever 21, and Zara. But I actually don't shop much—as a blogger, I get a lot for free.

**What's your office fashion advice?**
Mix up your prints, not your lengths.

**Interview by Arianne Cohen**

# How Did I Get Here?

# BERNARD TYSON

*Chairman and chief executive officer, Kaiser Permanente*

"My mom was sick from diabetes, so we were in hospitals a lot, and I decided I wanted to run my own."

## Education

Vallejo High School, class of 1977, Vallejo, Calif.

Golden Gate University, class of 1982 (B.A.), class of 1984 (MBA), San Francisco

Elementary school portrait, age 12

"I got my MBA in health service administration and got to see the hospital worldview. Everything happens there, from birth to death. You see all the emotions."

## Work Experience

**1981–83**
Administrative analyst, Vallejo General Hospital

"I did my first internship at the hospital I grew up in with my mom, and they hired me."

**1987–92**
Assistant administrator, Kaiser Permanente Medical Center San Francisco

Working as assistant administrator, 1987

"I thought I had arrived—I never thought it would only last for a year."

**1992–93**
CEO, Kaiser Foundation Hospital Santa Rosa

**1993–99**
Vice president, senior vice president, division president for central east division, Kaiser Permanente

"I learned how to lead by selling and influencing, as opposed to having complete control."

"We had a very aggressive growth plan outside of California and almost went bankrupt: We grew too fast."

**1999–2006**
SVP, chief operating officer for regions outside California; SVP, brand strategy, Kaiser Permanente

"Our new CEO needed someone to develop the brand and strategy. It was the first time I understood the difference between leading with vision and leading with organizational authority."

Had open-heart surgery in 2000

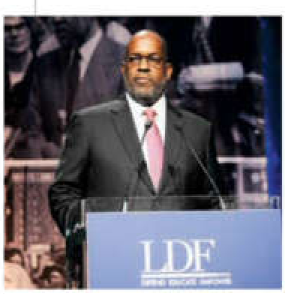
**2006–10**
Executive VP, health plan and hospital operations, Kaiser Permanente

**2010–13**
President and COO, Kaiser Permanente

**2013–14**
CEO, Kaiser Permanente

**2014–Present**
Chairman and CEO, Kaiser Permanente

"I still do hospital visits, and I can tell how well it's run in a couple minutes: How clean are the floors? How does the staff respond? What's the vibe?"




Speaking at the 2014 NAACP Legal Defense & Education Fund Annual Gala, which commemorated the 60th anniversary of *Brown v. Board of Education*

At the White House Summit on Cybersecurity and Consumer Protection, 2015

## Life Lessons

**1.** "My role is significant but not the most important in the organization." **2.** "No one is promised the end of today." **3.** "Drink black coffee. My uncle told me it impresses people and puts the fear of God in them."



Courtesy subject (3). Alamy (1). Getty Images (2)

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